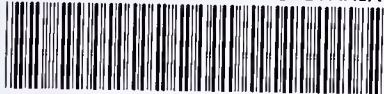


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REPORT

OF

**THE COMMISSION TO INVESTIGATE
THE INCREASE IN THE COST OF
ANTHRACITE COAL IN THE
COMMONWEALTH OF
PENNSYLVANIA**

TO THE GOVERNOR AND LEGISLATURE

**PURSUANT TO JOINT RESOLUTION
OF JUNE 15, 1915**

TESTIMONY NOT INCLUDED

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Report of Coal Commission

To His Excellency the Governor, and to the Senate and House of Representatives of the Commonwealth of Pennsylvania.

Gentlemen: By a joint resolution of your Honorable bodies, approved by the Governor, June 15th, 1915, P. L. 974, it was provided as follows:

A JOINT RESOLUTION

Providing for a commission to investigate and report the increase in the cost of anthracite coal, alleged to be due to the tax imposed thereon; empowering said commission to issue subpoenas and providing for the attendance of witnesses, and the penalty for failure to obey such subpoenas; and making an appropriation for the cost and expense of said commission.

Nature of inquiry.

Section 1. Be it enacted, &c., That a commission of three be appointed by the Governor to serve without compensation, to investigate the cause or causes of the raise of said price of anthracite coal, either by operators of anthracite mines or dealers in anthracite coal, whether the same was justified or not, and whether the same was done as a result of any illegal combination or confederation upon the part of the operators of anthracite coal mines or dealers in anthracite coal and investigate and report all other facts and circumstances in reference thereto; said commission to report to the Governor on the first of January, one thousand nine hundred and sixteen, and make a further report to the Governor and to the Legislature on the first day of January, one thousand nine hundred and seventeen.

Reports.

Section 2. For the purpose of enabling said commission to carry out and perform its duties, the said commission shall have the right to sit in any part of this Commonwealth; and shall have power to compel the attendance of witnesses and the production of books, papers and other evidence at the meeting of the commission, and for that purpose may issue subpoenas, signed by the president of the commission, and cause the same to be served and executed in any Court of this Commonwealth; and if any witness shall refuse to testify to any fact within his knowledge, or to produce any books or papers within his possession or under his control, the secretary of the commission shall forthwith report the facts of such refusal to the Court of Common Pleas wherein such witness resides, or wherein his attendance

Rights and powers.

Refusal of witnesses to testify, etc.

Order of Court. was required and all questions arising upon such refusal shall at once be heard by said Court. If the Court determines that the testimony or evidence required by such witness is legal and properly competent and ought to be given or produced by him, then said Court shall make an order commanding such witness to testify or produce books or papers, as aforesaid, in disobedience of such order of the Court, then the said Court shall have power to order the commitment of such witness to the county jail of the proper county for contempt.

Contempt.

Section 3. The said commission shall have power to employ a secretary and stenographer and to call upon the Attorney General for such legal advice as it may require.

Appropriation.

Section 4. The sum of five thousand dollars (\$5,000.00) is hereby appropriated to the payment of the costs and expenses of said commission to be drawn upon the requisition of the chairman thereof and paid as other appropriations are now by law paid.

Approved the 15th day of June, A. D. 1915.

MARTIN G. BRUMBAUGH.

IN COMPLIANCE WITH THE SAID RESOLUTION YOUR COMMISSION HAS THE HONOR TO REPORT :

Appointment of members of Commission.

Pursuant to the authority of the resolution the Governor appointed to said commission on January 11th, 1916, Thomas Martindale, of the City of Philadelphia; Robert S. Gawthrop, of the Borough of West Chester, and John Langdon, of the Borough of Huntingdon.

Shortly thereafter, appointment to the commission, was declined by Thomas Martindale, and the vacancy occasioned thereby was filled by the appointment of C. Tyson Kratz, of the Borough of Norristown.

Organization.

On the 5th of April, 1916, the three members of the commission met in the office of the Governor for the purpose of organization and selected Robert S. Gawthrop as chairman of the commission.

Counsel.

The Attorney General being requested by the commission to assign counsel from his department to assist in the investigation, retained as special counsel for the Commonwealth J. Paul MacElree, Esq., whose services to the commission have been continuous.

Investigation outlined.

Immediately thereafter the Commission, with its counsel, met

at the office of the Attorney General and determined upon the method of conducting the investigation, which was immediately undertaken.

On July 19th, before any formal hearings had been held, C. Tyson Kratz, Esq., one of the commissioners, died very suddenly, and the work of the Commission was somewhat delayed by reason thereof, no appointment being made to fill the vacancy until the 21st of September, 1916, when Edwin J. Lafferty, of the City of Philadelphia, was appointed to the Commission and accepted the appointment.

Death of C.
Tyson Kratz,
Esq.

From July, 1916, until January first, 1917, the Commission and its counsel have been constantly at work seeking to carry out the purpose of the Legislature, as set forth in the resolution authorizing the appointment of the Commission.

Period of in-
vestigation.

In 1913 the Legislature of Pennsylvania, seeking a source for additional revenue enacted

AN ACT

Laying a tax on anthracite coal, and providing for the collection and distribution of the same.

Section 1. Be it enacted, etc., That hereafter every ton of anthracite coal of the weight of two thousand two hundred and forty pounds avoirdupois, prepared for market in this Commonwealth, shall be subject to a State tax of two and one-half per centum of the value thereof when prepared for market, to be settled and collected as provided by law for other State taxes.

Taxation of an-
thracite coal.

Section 2. Every operator of an anthracite coal mine or mines in this Commonwealth shall report to the Auditor General, in the month of January in each year thereafter, the number of such tons of anthracite coal mined by such operator within the calendar year then next preceding, and the value thereof prepared for market. Such report shall be in writing, under the oath of the operator, if an individual, or of a principal executive officer of a corporation, limited partnership, or joint stock association.

Report of oper-
ator.

Oath.

Section 3. If any operator shall fail to furnish such report within the time required, it shall be the duty of the accounting officers of the Commonwealth to add ten per centum to the tax for each and every year for which such report was not so furnished, which percentage shall be settled and collected with the said tax in the usual manner of settling accounts and collecting such taxes; and if any individual operator, or the officers of an

Failure to re-
port.

Penalty.

operator being a corporation, limited partnership, or joint-stock association, or any of them, shall intentionally fail to make such report, he or they shall be deemed guilty of a misdemeanor, and on conviction thereof shall be sentenced to pay a fine of five hundred dollars, and undergo imprisonment not exceeding one year, or both or either, at the discretion of the Court.

Section 4. If the Auditor General or State Treasurer is not satisfied with the report so made, they are hereby authorized and empowered to make an estimate of the number of tons mined by the operator, and to settle an account on the basis of such estimate for the taxes, penalties, and interest due the Commonwealth thereon, with the right to the operator, dissatisfied with any settlement so made, to appeal therefrom in the manner provided by law; and, if no such report is made, the Auditor General and State Treasurer shall make an estimate and settle an account as aforesaid, from which settlement there shall be a right of appeal in the manner provided by law.

Section 5. Each county shall receive from the State Treasurer, for the use of the several cities, boroughs, and townships thereof, one-half of the said tax collected from operators in said county; and the treasurer thereof shall, within thirty days thereafter, pay over the same to the treasurers of the several cities, boroughs, and townships in said county pro rata, according to their respective populations as shown by the last preceding United States census.

APPROVED—the 27th day of June, A. D. 1913.

JOHN K. TENER.

In pursuance to the said Act of Assembly the various coal operators mining anthracite coal in Pennsylvania, filed their reports, as required by the Act of Assembly, with the Auditor General, but with the exception of four small payments to the State, none of the operators ever undertook to comply with the Act with respect to paying the tax to the State, and in October, 1915, the Act was declared unconstitutional.

The Commission first directed the following communication to all the anthracite operators in the State of Pennsylvania:

Gentlemen:

The Commission, appointed by the Honorable Martin G. Brumbaugh, Governor of the Commonwealth, in pursuance of the Joint Resolution of June 15th, 1915, P. L. 974, to investigate

Intentional failure to report.

Penalty.

Estimate by State officers.

Appeal. If no report is made.

Estimate. Appeal.

Distribution of one-half of tax.

Reports filed.

Act declared unconstitutional.

Letter to operators.

the causes of the increase in the cost of anthracite coal, and to report the same to the Governor and to the Legislature on the first day of January, 1917, desire to notify you that they wish to secure certain facts from the operators of anthracite coal mines and dealers in anthracite coal. To that end, the Commission requests you to furnish it with the following information:

Letter to re-tailers.

1. The value, per ton, prepared for market, of the different sizes of anthracite coal, on June 20, 1913.

2. The factors which enter into this calculation.

3. The value, per ton, prepared for market, of the different sizes of anthracite coal on September 1, 1913; January 1, 1914, January 1, 1915; January 1, 1916.

4. The factors which enter into these calculations.

5. How much, if anything, you paid to the State, for taxes under the Coal Tax Act of June 27, 1913, P. L. 639.

6. How much, if anything, you increased the price of coal to meet the tax imposed by said Act of Assembly.

7. What has become of the money, if any, so charged.

8. Has the value per ton to the operator of the various sizes of coal, prepared for market, been affected either by the Coal Tax Act or by the decision of the Supreme Court, declaring the Coal Tax Act unconstitutional? If so, how much?

9. A list of dealers furnished with coal since June 27, 1913, and the amount furnished to each.

If you will furnish us with this information at an early date, it will materially aid us in this investigation, and, we believe, will relieve you, in a large measure, from attendance at hearings before the Commission, and us from compelling such attendance and the production of books and other evidence, before the Commission.

Yours very truly,

J. PAUL MACELREE,

Counsel.

Replies to this communication were received from the following operators:

A. F. Wolf.....	Wilkes-Barre, Pa.
A. Pardee & Co.....	Hazleton, Pa.
A. S. Van Wickle Estate.....	Hazleton, Pa.
Albright Coal Company.....	Scranton, Pa.
Alden Coal Company.....	Alden Station, Pa.
Alliance Coal Mining Co.....	Philadelphia, Pa.
Archbald Coal Company.....	Wilkes-Barre, Pa.
Beaver Valley Coal Company.....	Baltimore, Md.
Bowen Bros.....	Schuylkill Haven, Pa.
Buck Run Coal Company.....	Minersville, Pa.
Bull Head Coal Company.....	Scranton, Pa.
Butcher Creek Coal Co.....	St. Clair, Pa.

Cambridge Coal Co.....	Shenandoah, Pa.
Carney & Brown Coal Co.....	Dunmore, Pa.
Central Coal Company.....	Hudson, Pa.
Chas. M. Dodson & Co.....	Bethlehem, Pa.
Clearview Coal Co.....	Scranton, Pa.
Clinton Falls Coal Co.....	Forest City, Pa.
Colonial Collieries Co.....	Philadelphia, Pa.
Connell Anthracite Coal Co.....	Scranton, Pa.
Cox Bros. & Co.....	Wilkes-Barre, Pa.
Dark Water Coal Co.....	Minersville, Pa.
Delaware & Hudson Co.....	Scranton, Pa.
Delaware, Lackawanna & Western R. R. Co.....	New York City.
Delaware Seamless Tube Co.....	Auburn, Pa.
Dodson Coal Co.....	Auburn, Pa.
Dolph Coal Co.....	Scranton, Pa.
E. C. Luther Co.....	Pottsville, Pa.
E. S. Stackhouse Coal Co.....	Shickshinney, Pa.
East Bear Ridge Colliery Co.....	Mahanoy Plane, Pa.
East Boston Coal Co.....	Kingston, Pa.
Ellsworth Coal Mining Co.....	Philadelphia, Pa.
Elmer Meyer Co.....	Summit Hill, Pa.
Enterprise Coal Co.....	Scranton, Pa.
Evans Colliery Co.....	Beaver Meadows, Pa.
Excelsior Coal Co.....	Excelsior, Pa.
Forty Fort Coal Co.....	Scranton, Pa.
G. B. Markle Co.....	Jeddo, Pa.
Geo. F. Lee Coal Co.....	Wilkes-Barre, Pa.
Girard Mammoth Coal Co.....	Mahanoy City, Pa.
Gorman & Champion Co.....	Tuscarora, Pa.
Green Ridge Coal Co.....	Scranton, Pa.
Greenough Red Ash Coal Co.....	Shamokin, Pa.
H. H. Smith & Co.....	Philadelphia, Pa.
Haddock Mining Co.....	Wilkes-Barre, Pa.
Harleigh-Brookwood Coal Co.....	Philadelphia, Pa.
Harrisburg Light & Power Co.....	Harrisburg, Pa.
Harwood Coal Co.....	Philadelphia, Pa.
Hillside Coal & Iron Co.....	Scranton, Pa.
Hudson Coal Co.....	Scranton, Pa.
J. S. Wentz & Co.....	Philadelphia, Pa.
Jermyn & Co.....	Rindham, Pa.
Kingston Coal Co.....	Kingston, Pa.
Lackawanna Coal Co. (Ltd.).....	Scranton, Pa.
Lehigh Coal & Navigation Co.....	Philadelphia, Pa.
Lehigh Valley Coal Co.....	Wilkes-Barre, Pa.
Lehigh & Wilkes-Barre Coal Co.....	Wilkes-Barre, Pa.
Locust Mountain Coal Co.....	Bethlehem, Pa.
Lytle Coal Co.....	Philadelphia, Pa.

M. S. Kemmerer & Co.....	Sandy Run, Pa.
Maryd Coal Co.....	Philadelphia, Pa.
Mid Valley Coal Co.....	Philadelphia, Pa.
Mill Creek Coal Co.....	Mauch Chunk, Pa.
Minooka Coal Co.....	Scranton, Pa.
Moosic Mountain Coal Co.....	Marshwood, Pa.
Mt. Hope Coal Co.....	St. Clair, Pa.
Mt. Jessup Coal Co.....	Peckville, Pa.
Mt. Lookout Coal Co.....	Peckville, Pa.
Northern Anthracite Coal Co.....	Lopez, Pa.
Northern Coal & Iron Co.....	Scranton, Pa.
No. 6 Coal Co.....	Dunmore, Pa.
Oak Hill Coal Co.....	Duncott, Pa.
Pardee Bros. & Co.....	Lattimer Mines, Pa.
Penna. Coal Co.....	Scranton, Pa.
Peoples Coal Co.....	Scranton, Pa.
Phila. and Reading Coal & Iron Co..	Philadelphia, Pa.
Pine Hill Coal Co.....	Scranton, Pa.
Plymouth Red Ash Coal Co.....	Scranton, Pa.
Port Carbon Coal Co.....	Port Carbon, Pa.
Price-Pancoast Coal Co.....	New York City.
Raub Coal Co.....	Luzerne, Pa.
Red Ash Coal Co.....	Scranton, Pa.
River Coal Co.....	Scranton, Pa.
St. Clair Coal Co.....	Scranton, Pa.
Schuylkill Coal & Iron Co.....	Scranton, Pa.
Scranton Coal Co.....	Scranton, Pa.
Shanferoke Coal Co.....	Scranton, Pa.
Shipman Coal Co.....	Shamokin, Pa.
Silverton Coal Co.....	Scranton, Pa.
South Side Coal Co.....	Scranton, Pa.
Susquehanna Coal Co.....	Philadelphia, Pa.
Temple Coal Co.....	Scranton, Pa.
Thomas Colliery Co.....	Philadelphia, Pa.
Traders Coal Co.....	Scranton, Pa.
Treverton Colliery Co.....	Shamokin, Pa.
Upper Lehigh Coal Co.....	Philadelphia, Pa.
West End & Melville Cos.....	Scranton, Pa.
West Nanticoke Coal Co.....	Philadelphia, Pa.
Wilkes-Barre Anthracite Coal Co.....	Wilkes-Barre, Pa.
Wilkes-Barre Colliery Co.....	Philadelphia, Pa.
Wolf Colliery Co.....	Drifton, Pa.

Shortly after the above replies were received the following letter was addressed to upwards of two thousand retail coal dealers:

Gentlemen:

The Commission appointed by the Honorable Martin G. Brumbaugh, Governor of the Commonwealth, in pursuance of the Joint Resolution of June 15, 1915, P. L. 974, to investigate the causes of the increase in the cost of anthracite coal and to report the same to the Governor and to the Legislature on the first day of January, 1917, desire to notify you that they wish to secure certain facts from the dealers in anthracite coal. To that end the Commission requests you to furnish it with the following information:

1. The price, per ton, paid by you for the different sizes of anthracite coal on January 1, 1913; July 1, 1913; September 1, 1913; January 1, 1914; January 1, 1915, and January 1, 1916.
2. What were the prices at which you sold coal of various sizes on the dates referred to above?
3. From what operator or operators you bought coal during the period referred to, together with the quantities purchased and the dates?
4. What increase in cost was paid by you on the coal purchased by you by reason of the State Tax of $2\frac{1}{2}\%$ passed in 1913?
5. How was said increase charged—as a separate item—or merely added to the price?
6. To whom were said increases paid?
7. Has the money so collected on account of State tax been returned by the operators to you?
8. If not, have you made any effort to have the same returned?
9. If said money has been returned to you, what has become of it?

Yours very truly,
J. PAUL MACELREE,
Counsel.

To this letter, more or less complete replies were received from four hundred dealers.

Your Commission then held public hearings in the cities of Philadelphia, Scranton, Wilkes-Barre, Erie, Harrisburg and Pottsville.

Scope of Investigation

Your Commission sought to inquire with respect to the two-fold purposes for which it was appointed:

FIRST, With respect to the cause or causes of the raise of price, either by operators of anthracite mines or dealers in anthracite coal, whether the same was done as a result of any illegal combination or confederation upon the part of the operators of anthracite coal mines or dealers in anthracite coal, and,

Was there an
illegal combination?

SECOND, With respect to the cause or causes in the raise of price of anthracite coal, whether the same was justified or not and all facts and circumstances in reference thereto.

Was raise in
price justified?

AT PHILADELPHIA your Commission first heard on September seventh, officers and representatives of various retail coal concerns in and about the City of Philadelphia, and there appeared before your Commission at that time George B. Newton Company, by Samuel B. Crowell, vice president; Edwin J. Cummings Coal Company, by Edwin J. Cummings, president; Terminal Coal Company, James E. Kunkel, president; Walter J. Crowder & Company, by William T. Brandreth; H. F. Brunner Company, by Frank E. Smedley, secretary; William W. Chambers Company, by William W. Chambers, president; Bell Coal Company, by George W. Heuer, president; John C. Hancock & Company, by Walter C. Hancock, a member of the firm; Walter A. Dwyer in person; Owen Letters Sons, by Ambrose Letter, a member of the firm, and Walter T. Bradley Company, by James M. Fuller, a member of the firm.

First hearing
for retailers.

AT SCRANTON, on September 27th and 28th, your Commission heard officers and representatives of coal operators in the Wyoming district. There appeared before the Commission Estate of A. S. Van Wickel, by Henry C. Pierson, sales agent; Temple Coal Company, by Thomas H. Meade, auditor; Peoples Coal Company, by R. L. Kissinger, secretary; Pennsylvania Coal Company, and Hillside Coal & Iron Company, by W. A. May, president, and H. J. Connolly, accountant.

Hearing for
Scranton operators.

Hearing for
Wilkes-Barre
operators.

AT WILKES-BARRE, September 29th, your Commission continued the hearing of officers and representatives of coal operators in the Wyoming and Lehigh districts and there appeared before the Commission Pine Hill Coal Company, by Jessie Dimmick, accountant; Red Ash Coal Company, by Walter Roberts, treasurer; Buck Run Coal Company, and Dark Water Coal Company, by James B. Neale, president; George F. Lee Coal Company, by George F. Lee, general manager; Pardee Bros. & Company, by John W. Crook, auditor, Mill Creek Coal Company, by W. Kishbaugh, auditor; Raub Coal Company, by J. B. Blackman, auditor; Lehigh & Wilkes-Barre Coal Company, by Charles F. Huber, president and general manager; G. B. Markle & Company, by H. E. Fernan, selling agent; Oak Hill Coal Company, by John T. Cartright, superintendent.

Hearing for re-
tailers in
Western Pa.

AT ERIE, on October 20th, your Commission heard officers and representatives of various retail coal dealers in western Pennsylvania, and there appeared before your Commission, Gulcher Bros., of Erie, by Charles J. Gulcher, a partner; Heppenstall & Marquis, of Pittsburgh, by George T. Heppenstall, a partner; J. M. Gilchrist's Sons, of Pittsburgh, by J. M. Gilchrist, president; Keller Bros., of East Liberty, by Elliott Keller, a partner; United Lumber & Coal Company, Ltd., of Oil City, by E. R. Philp, treasurer; Burnwell Coal Company, of Erie, by E. E. Magill, owner; J. S. Siegel Coal Company, of Erie, by Charles Siegel, a partner; A. H. Lemon & Sons, of Erie, by A. H. Lemon, a partner.

Hearing for big
operators.

AT PHILADELPHIA, on November 14, 15 and 16, your Commission heard officers and accountants of the larger coal operators and had before it for exhaustive examination Lehigh Valley Coal Company, by Hon. Frank Wheaton, counsel, and Louis A. Tompkins, controller; G. B. Markle Company, by W. W. Hindenach, secretary and treasurer; Lehigh Valley Coal Sales Company, by F. P. Ryders, sales agent; Philadelphia & Reading Coal & Iron Company, by W. J. Richards, president; Lehigh Coal & Navigation Company, by Samuel D. Warriner, president; H. H. Lineaweaver & Company, by H. H. Lineaweaver, president; Susquehanna Coal Company, by A. D. Sexton, controller; Thorne, Neale & Company, by Charles E. Fernburg, general sales agent; Whitney & Kemmerer, by Charles H. Jacobs, accountant.

AT HARRISBURG, on December first, your Commission had before it Hon. William A. Magee, a member of the Public Service Commission of the Commonwealth of Pennsylvania, and Samuel D. Warriner, president of the Lehigh Coal & Navigation Company, to consider and discuss the feasibility of reducing transportation cost, by utilization of existing canal routes, or by a canalization of the river routes from the anthracite coal fields to Philadelphia.

William A. Magee, proposal on canalization.

AT PHILADELPHIA, on December eight, the Commission heard Wilfred H. Schoff, secretary of the Atlantic Deeper Waterways Association, with respect to the same general proposition as that presented by William A. Magee.

Proposal of Atlantic Deeper Waterways Association.

AT POTTSVILLE, on December twenty-second, the Commission heard various employees of the Philadelphia & Reading Coal & Iron Company with respect to the acreage owned, controlled, leased, under operation, operated on royalties, from which royalties are received by the Philadelphia & Reading Coal & Iron Company and employees of the Cambridge Coal Company, Ellsworth Coal Company, St. Clair Coal Company, Oak Hill Coal Company, Mt. Hope Coal Company, Maryd Coal Company, Morea Coal Company, Locust Mountain Coal Company, and Beaver Brook Coal Company, with respect to limitations imposed upon them by those owning or in control of coal lands operated by and adjacent to collieries of the above companies.

Hearing on restrictions and curtailment in Schuylkill region.

In addition to the hearings above mentioned counsel for the Commission consulted with representatives of the Federal Trade Commission, the Inter-State Commerce Commission, the Public Service Commission of the Commonwealth of Pennsylvania, counsel for the Retail Coal Dealers Association, officers, representatives and counsel for various coal operators, retail dealers, boards of trade and associations, seeking to gather all of the available data contemplated by your Resolution.

Miscellaneous hearings.

Preface to Findings and Conclusions

Division with
respect to fac-
tors.

Your Commission naturally sought to divide its investigation with respect to the varying factors which enter into the price of anthracite coal and have sought to so classify these factors as to permit the finding of proper conclusions, with respect to each one independent of the others, and to suggest where possible a solution, which might result in a decrease in the price of anthracite coal to the public, by decreases in the various factors entering into the price of coal.

The following pages are devoted

Extent.

FIRST. To a brief resume of the extent of the anthracite coal fields in Pennsylvania, their history, development, location, etc.

Cost of pro-
duction.

SECOND. To a detailed report of the cost of producing anthracite coal, the profits of the operators and of their affiliated companies, and whether such increases in the price of anthracite coal as have been occasioned by the operators have been justified.

Cost of trans-
portation.

THIRD. The cost of transporting, the profits of the carriers, and the question of a solution of the high cost of such transportation to the public.

Cost of selling.

FOURTH. The cost of selling and the profits of the middle man.

Cost of distrib-
uting.

FIFTH. The cost of distributing and the profits of the retailer.

How title is
held.

SIXTH. The manner of acquiring title to the coal lands, the combinations by which title is held, and suggestions as to the possibility of relief to the public by appropriate legislation seeking to make available vast acreages of virgin coal land now being held in reserve.

FIRST. A BRIEF SYNOPSIS OF THE EXTENT, LOCATION, HISTORY AND DEVELOPMENT OF THE ANTHRACITE COAL FIELDS IN PENNSYLVANIA

Geographical
location of
supply.

Practically the entire source of supply of this fuel is confined to an area of 496 square miles, in nine counties in the State. Of these nine counties, five, *i. e.* Lackawanna, Luzerne, Schuylkill, Northumberland, and Carbon, produce ninety-six per cent. of the total output. The four less important producing counties are Susquehanna, Dauphin, Columbia and Sullivan.

A tabular summary of the several sections of the anthracite fields is given in the following statement:

Anthracite coal fields, by field, local district and trade region.

Coal Field or Basin		Local District.	Trade Region	Location of fields.
Northern	{	Carbondale	Wyoming	
		Scranton		
		Pittston		
		Wilkes-Barre		
		Plymouth		
		Kingston		
Eastern Middle..	{	Green Mountain	Lehigh	
		Black Creek		
		Hazleton		
		Beaver Meadow		
		Panther Creek		
Southern	{	East Schuylkill	Schuylkill	
		Western Schuylkill		
		Lorberry		
		Lykens Valley		
Western Middle..	{	East Mahanoy		
		West Mahanoy		
		Shamokin		

THE ANTHRACITE FIELDS ARE REACHED BY ELEVEN SO CALLED INITIAL RAILROADS, AS FOLLOWS:

- Philadelphia & Reading Railway.
- Lehigh Valley Railroad.
- Central Railroad of New Jersey.
- Delaware, Lackawanna & Western Railroad.
- Delaware & Hudson Co.'s Railroad.
- Pennsylvania Railroad.
- Erie Railroad.
- New York, Ontario & Western Railway.
- New York, Susquehanna & Western Railroad (Wilkes-Barre & Eastern.)
- Lehigh & New England Railroad.

Initial rail-roads.

A general idea of the various sizes of anthracite coal and the uses to which they are put by the consumer, is shown in the following table:

Markets for
prepared sizes.

Markets for
steam sizes.

The stove and chestnut sizes are in the greatest demand and make up over 40 per cent. of the total shipments. They are essentially domestic sizes, and the relatively large proportion they make of the shipments serves as an index to the conditions governing the anthracite trade. Egg coal finds its way principally to the furnaces of residences, and pea coal is used in the same way to some extent, though it is also used for kitchen ranges, and some of it goes with the buckwheat, rice and barley for use as steam coal. The small sizes come directly into competition with bituminous and sometimes are used mixed with bituminous coal for steam purposes, chiefly in hotels, apartment houses, and office buildings.

The standard screens used in the preparation of anthracite have the following dimensions:

STANDARD SIZES OF ANTHRACITE.

Standard sizes.

SIZE.	THROUGH.	OVER.
Broken or grate.....	4 inch square	2¾ inch square
Egg	2¾ “ “	2 “ “
Stove	2 “ “	1¾ “ “
Chestnut	1¾ “ “	¾ “ “
Pea	¾ “ “	½ “ “
Buckwheat No. 2 or rice.....	¼ “ “	⅛ “ “
Buckwheat No. 3 or barley.....	⅛ “ “	1-16 “ round

Shipments for
1913.

The quantity in long tons of the various sizes shipped for 1913 and the percentage each bears to the total shipment, on the authority of the respondents in the government case, 4914 I. C. C., is shown below.

SIZE.	TONS.	PERCENTAGE OF TOTAL.
Lump and steamboat.....	362,714	.51
Broken	3,503,495	4.92
Egg	8,978,107	12.59
Stove	13,921,786	19.53
Chestnut	17,168,817	24.08
Pea	8,208,681	11.51
Buckwheat No. 1	9,504,161	13.33
Buckwheat No. 2 and rice.....	5,634,037	7.90
Buckwheat No. 3 and barley	3,688,557	5.17
Screenings	325,361	.46
	71,295,716	100.

The following table shows the shipment of anthracite in 1914 and 1915 by sizes in gross tons:

	1914.	1915.	
Lump and steamboat	180,516	115,348	
Broken	3,547,717	3,349,933	
Egg	8,718,809	8,117,340	
Stove	14,505,502	14,061,069	
Chestnut	16,224,892	15,570,013	
Pea	8,277,619	8,210,668	Shipments for 1914 and 1915.
Buckwheat No. 1	9,459,788	9,322,533	
Buckwheat No. 2 (rice)	4,622,389	5,560,498	
Buckwheat No. 3 (barley)	4,505,986	3,836,125	
Screenings	421,428	522,929	
	<hr/> 70,464,046	<hr/> 68,666,456	

Below is given the shipments of anthracite according to sizes for the period from 1890-1913 in long tons:

Year.	Sizes above Pea.		Pea and Smaller.		Total Shipments.
	Quantity.	Per-centage.	Quantity.	Per-centage.	
1890...	28,154,678	76.9	8,460,781	23.1	36,615,459
1891...	30,604,566	75.7	9,843,770	24.3	40,448,336
1892...	31,868,278	76.0	10,025,042	24.0	41,893,320
1893...	32,294,233	74.9	10,795,304	25.1	43,089,537
1894...	30,482,203	73.7	10,908,997	26.3	41,391,200
1895...	32,469,367	69.9	14,042,110	30.1	46,511,477
1896...	30,354,797	70.3	12,822,688	29.7	43,177,485
1897...	28,510,370	68.5	13,127,494	31.5	41,637,864
1898...	28,198,532	67.3	13,701,219	32.7	41,899,751
1899...	31,506,700	66.1	16,158,504	33.9	47,665,204
1900...	29,162,459	64.7	15,945,025	35.3	45,107,484
1901...	34,412,974	64.2	19,155,627	35.8	53,568,601
1902...	19,025,632	61.0	12,175,258	39.0	31,200,890
1903...	37,738,510	63.6	21,624,321	36.4	59,362,831
1904...	35,636,661	62.0	21,855,861	38.0	57,492,522
1905...	37,425,217	60.9	23,984,984	39.1	61,410,201
1906...	32,894,124	59.1	22,804,471	40.9	55,698,595
1907...	39,332,855	58.6	27,776,538	41.4	67,109,393
1908...	38,319,325	59.3	26,345,689	40.7	64,665,014
1909...	36,437,762	58.1	26,250,597	41.9	62,688,359
1910...	38,415,323	58.5	27,297,438	41.5	65,712,761
1911...	41,728,071	59.2	28,696,126	40.8	70,424,197
1912...	39,538,583	60.6	25,662,670	39.4	65,201,253
1913...	43,934,919	61.6	27,360,797	38.4	71,295,716
1914...	43,176,136	61.3	27,270,886	38.7	70,447,022

Table of ship-
ments 1890-
1914.

Taking the distribution in recent years and following a slightly variant classification it is indicated by the records that about
27.64% goes to New York tidewater points
6.89% goes via rail through New England gateways
10.29% goes to western terminal of trunk lines far beyond
8.01% goes to Great Lake ports
36.49% goes to points local to the originating lines
10.68% goes through junction points to other than anthracite carriers.

Percentage to various points of destination.

PRODUCTION AND STRIKE STATISTICS FOR ANTHRACITE COAL, 1900 TO 1914.

Statistics of strike periods.

Year	Total production in short tons (1)	Number of men employed	Days worked	Average tonnage per man per day	Number on strike	Total days lost from work	Average days lost per man
1900.....	57.3	144,206	166	2.40	100,000	3,500,000	35
1901.....	67.4	145,309	196	2.37	(2)	(2)	(2)
1902.....	41.3	148,141	116	2.40	145,000	14,210,000	98
1903.....	74.6	150,483	206	2.41	(2)	(2)	(2)
1904.....	73.1	155,861	200	2.35	2,228	34,103	15
1905.....	77.6	165,406	215	2.13	4,998	33,986	7
1906.....	71.2	162,355	195	2.25	161,039	5,958,443	37
1907.....	85.6	167,234	220	2.33	(2)	(2)	(2)
1908.....	83.2	174,174	200	2.39	(2)	(2)	(2)
1909.....	(3)	(3)	(3)	(3)	771	8,016	10
1910.....	84.4	169,497	229	2.17	2,853	15,739	6
1911.....	90.4	172,585	246	2.13	5,900	36,958	6
1912.....	84.4	174,030	231	2.10	151,958	6,913,475	45
1913.....	91.5	175,745	257	2.02	64,086	481,678	8
1914.....	90.8	179,679	245	2.06	26,115	179,743	7

- (1) In millions.
- (2) Practically no cessations or suspensions.
- (3) The year 1909 is omitted because of the absence of comparable data.

RANGE OF PRICES AT TIDEWATER.

Tidewater prices.

The tables below give the general average (free on board) of prices realized for anthracite coal sold at or near New York harbor points, which price determines the selling price for anthracite coal. The averages given are without the item of State tax, inasmuch as coal was sold during the period from 1913 to the present in both ways, and where State tax was included the average price received was ten cents higher on sizes larger than pea and five cents higher on pea. The figures given are the general average of prices realized from coal from the three fields without respect to the tonnage of any one of the three and are from figures furnished by the Anthracite Bureau of Information.

BROKEN.

	1913	1914	1915	1916
January	\$4.46	\$4.45	\$4.44	\$4.53
February	4.46	4.45	4.45	4.53
March	4.46	4.46	4.44	4.51
April	4.46	4.46	4.46	4.52
May	4.46	4.45	4.45	4.73
June	4.45	4.44	4.45	4.85
July	4.44	4.45	4.45	4.85
August	4.46	4.45	4.45	4.85
September	4.45	4.46	4.45	4.87
October	4.46	4.45	4.45	4.88
November	4.46	4.45	4.45	
December	4.46	4.44	4.45	

Range of prices
at tidewater.**EGG.**

	1913	1914	1915	1916
January	\$5.21	\$5.21	\$5.19	\$5.28
February	5.20	5.20	5.21	5.29
March	5.21	5.17	5.13	5.29
April	4.70	4.68	4.67	5.29
May	4.79	4.77	4.74	5.02
June	4.88	4.88	4.85	5.12
July	4.97	4.96	4.92	5.22
August	5.08	5.07	5.03	5.32
September	5.18	5.15	5.14	5.44
October	5.21	5.18	5.18	5.45
November	5.18	5.18	5.18	
December	5.19	5.20	5.18	

Range of prices
at tidewater.**STOVE.**

	1913	1914	1915	1916
January	\$5.21	\$5.20	\$5.20	\$5.28
February	5.21	5.21	5.21	5.29
March	5.21	5.16	5.14	5.29
April	4.71	4.68	4.69	5.29
May	4.80	4.79	4.75	5.28
June	4.90	4.88	4.86	5.38
July	4.97	4.98	4.93	5.47
August	5.08	5.08	5.05	5.58
September	5.19	5.18	5.15	5.69
October	5.21	5.21	5.19	5.70
November	5.21	5.19	5.18	
December	5.21	5.19	5.19	

Range of prices
at tidewater**CHESTNUT.**

	1913	1914	1915	1916
January	\$5.46	\$5.46	\$5.45	\$5.53
February	5.46	5.46	5.45	5.52
March	5.46	5.42	5.36	5.54
April	4.96	4.96	4.95	5.53
May	5.06	5.03	4.98	5.35
June	5.15	5.13	5.04	5.44
July	5.24	5.24	5.16	5.52
August	5.34	5.33	5.25	5.63
September	5.44	5.44	5.35	5.74
October	5.46	5.45	5.39	5.75
November	5.45	5.46	5.43	
December	4.36	5.46	5.42	

Range of prices
at tidewater.

PEA.

Range of prices
at tidewater.

	1913	1914	1915	1916
January	\$3.42	3.42	3.37	3.40
February	3.40	3.42	3.37	3.43
March	3.41	3.42	3.38	3.43
April	3.42	3.42	3.37	3.44
May	3.42	3.42	3.39	3.50
June	3.42	3.42	3.38	3.65
July	3.42	3.42	3.38	3.78
August	3.42	3.42	3.38	3.85
September	3.42	3.42	3.38	3.95
October	3.42	3.41	3.38	3.93
November	3.42	3.42	3.38	
December	3.42	3.41	3.41	

In connection with the above tables compiled by the Commission, an excerpt from exhibit 8 of the D. & H. Company in the Coal Trust case (page 5182), shows the following comparisons between the average prices for the years 1900 and 1913:

Comparative
prices.

	Year.		Increase	Per cent of Increase
	1900	1913		
Size of Coal	Price per long ton	Price per long ton		
Grate	\$3.08	\$4.47	\$1.39	.4513
Egg	3.44	5.11	1.67	.4854
Stove	3.81	5.11	1.30	.3412
Chestnut	3.84	5.35	1.51	.3932
Pea	2.45	3.49	1.04	.4245
Buckwheat	1.98	2.75	.77	.3888
Small	1.34	2.00	.66	.4925

Proportion of
selling price
retained by op-
erator, trans-
porter and re-
tailer.

The following comparative tables showing the wholesale and retail prices at tidewater, New York harbor, April first, 1914, and on line shipments to the City of Philadelphia, at the same time, show the amounts respectively retained by the retailer, transporter and the producer out of the consumer's payment for a long ton of coal. The middle man's profit, if sold through a selling agency, must be deducted from producer's amount. The first of these tables is from brief of respondents before the I. C. C., 4914, and the second compiled from statistics gathered by your Commission at hearings in the City of Philadelphia.

NEW YORK HARBOR.

Size of Coal	Con- sumer pays for long ton	Retail- er pays for long ton	Retailer Retains		Transporter Retains		Producer Retains	
			Amt.	Per cent of total	Amt.	Per cent of total	Amt.	Per cent of total
Grate	\$7.28	\$4.60	\$2.68	36.81	\$1.60	21.98	\$3.00	41.21
Egg	7.28	4.85	2.43	33.38	1.60	21.98	3.25	44.64
Stove	7.28	4.85	2.43	33.38	1.60	21.98	3.25	44.64
Chestnut ..	7.56	5.10	2.46	32.54	1.60	21.16	3.50	46.30
Pea	5.88	3.55	2.33	39.63	1.45	24.66	2.10	35.71

PHILADELPHIA LINE SHIPMENTS

(From Schuylkill Region.)

Size of Coal	Con- sumer pays for long ton	Retail- er pays for long ton	Retailer Retains		Transporter Retains		Producer Retains	
			Amt.	Per cent of total	Amt.	Per cent of total	Amt.	Per cent of total
Egg	\$6.25	\$4.95	\$1.30	20.80	\$1.70	27.20	\$3.25	52.00
Stove	6.50	5.20	1.30	20.00	1.70	26.15	3.50	53.85
Chestnut ..	6.75	5.35	1.40	20.74	1.70	25.19	3.65	54.07
Pea	5.25	3.90	1.35	25.71	1.60	26.66	2.50	47.63

The reason for taking the month of April, 1914, in the upper table was because the producer received the lowest price for his coal in that month, because of the usual fifty cent discount allowed on domestic sizes in April. It will be noted that no such discount is allowed on pea.

Your Commission is obliged to counsel for respondents in the Government case, for having chosen this month and for having chosen New York prices. The percentage retained by the carrier in the instance cited first, is made to appear quite small, because of the higher prices charged by retailers in New York City. The retailer there, as elsewhere, buys his coal in long tons, but quotes the same to his retail grade as prices for short tons, which short ton prices are comparable to long ton prices charged elsewhere.

Proportionately the transporter discriminating against Philadelphia in the matter of freight rates and getting less for his New York haul than his Philadelphia haul and charging the same as a percentage of a larger amount, seeks to foist the larger percentages upon the retailer, with which fruitless effort your Commission will deal more fully under its proper heading.

Discriminating
freight rates.

The following table based on short tons and taking as a suppositious retail price for the same in Philadelphia, the percentage of the price charged for a long ton and taking the most favorable freight rate, that of \$1.70 from the Schuylkill region for a long ton, which for a short ton amounts to \$1.52, this table shows the *distance carried, the freight rate received by the carrier, the wholesale price obtained by producer, at the mine, and the cost to consumer at destination of shipments* of domestic sizes of anthracite coal to the line points designated.

SECOND. THE COST OF PRODUCING ANTHRACITE COAL, PROFITS OF THE OPERATORS, INCREASES IN PRICE AND OCCASION FOR THE SAME.

With respect to the producing end of the anthracite business, the Commission, as indicated before, directed a letter of inquiry to all of the anthracite operators and followed that by requesting their appearance at public hearings of the Commission, to which the operators responded fully and completely with but a single exception.

Scope of investigation.

By the two courses pursued the investigation was directed toward determining the capitalization of the various companies and their bonded indebtedness. The question of tonnage produced during a period of years; the average cost of such production; the average price received per ton, and the gross margin of profit enjoyed by the various operators was gone into in detail. The manner in which the output was sold and the cost of selling were also gone into.

Questions relative to the collection of the State tax under the Roney Act of 1913 were directed to all of the operators, having in mind the particular reference to this phrase of the investigation in the body of your Resolution, and this question will be treated of in detail under a separate heading.

Further extended examination was made, seeking to determine any and all proper reasons necessitating the advance in the price of coal by the operator.

PRELIMINARY CONCLUSIONS.

It is conceded that with respect to the production of coal two factors are vitally important, all other things being equal, the annual tonnage produced and the percentage of prepared sizes secured in such production contribute in a great extent to the success or failure of anthracite mining. By prepared sizes are meant those sizes larger than pea, and which sizes the operators are able to sell at a profit above the producing cost, the remaining smaller or steam sizes being in every instance produced at greater expense than that at which such sizes can be marketed.

Two determining factors.

FINDINGS.

Having in mind the foregoing outline and intending to treat more largely with the question of increase actually necessitated in

Table showing
profits.

subsequent pages, the following tables show for the various years set forth the tonnage produced of all sizes; the proportion of prepared sizes; the average cost of production per ton; the average price received per ton, and the gross margin of profit per ton of many of the larger operators.

The gross margin of profit multiplied by the tonnage sold represents the amount available for the payment of interest on bonded debt and for the payments of dividends on stock. The royalties paid, where any are due, is charged to the cost of production and in most instances five cents a ton is charged to the cost of production to take care of the item of depletion of coal lands or diminution of supply.

LEHIGH VALLEY COAL COMPANY

Capital stock \$1,965,000.

Bonded debt \$19,688,000.

	Annual tonnage	Per cent of pre- pared sizes	Average cost of produc- tion	Average price re- ceived per ton	Gross margin of profit per ton
1913	7,004,107	67.85	\$2.367	\$2.5386	\$.1716
1914	6,785,955	65.02	2.2890	2.5020	.213
1915	6,466,170	66.58	2.3451	2.5811	.236

PHILADELPHIA & READING COAL & IRON COMPANY

Capital stock, \$8,000,000. Bonded debt—sinking fund loan outstanding, \$990,000. Company is also co-obliger with Reading Company under the general mortgage by the issue of Reading General Mortgage bonds outstanding \$98,165,000.

Fiscal year ending June 30th	Annual tonnage	Per cent of pre- pared sizes	Average cost of produc- tion	Average price re- ceived per ton	Gross margin of profit per ton
1913	11,089,742	55.	Figures not available with respect to anthracite		\$.344
1914	8,900,000	55.			.096
1915	8,161,836	58.			.027
1916	9,399,722	59.			.186

LEHIGH COAL & NAVIGATION COMPANY

Capital stock \$26,537,950.

Bonded debt \$26,980,000.

	Annual tonnage sold	Per cent of pre- pared sizes	Average cost of produc- tion	Average price re- ceived per ton	Gross margin of profit per ton
1913	3,529,094	47.3	\$2.2302	\$2.3391	\$.1089
1914	3,572,641	50.60	2.296	2.4948	.1988
1915	3,583,743	51.87	2.307	2.5007	.1937
1916		50.56	2.5032	2.7147	.2115 (9 months)

REPORT OF PENNSYLVANIA ANTHRACITE COAL COMMISSION.

The percentage of prepared sizes in the above instance is considerably below normal and is owing in part to the fact of a very considerable increase in washery tonnage. The percentage of prepared sizes based on commercial tonnage in 1913, being 54.6; in 1914, being 53.96; in 1915, being 53.38.

SUSQUEHANNA COAL COMPANY

Capital stock \$2,136,800. Bonded debt \$9,315,500.

	Annual tonnage	Per cent of pre- pared sizes	Average cost of produc- tion	Average price re- ceived per ton	Gross margin of profit per ton
1913	4,200,000	Figures	\$2.50	\$2.75	\$.24
1914	4,024,100	not avail-	2.59	2.75	.16
1915	3,764,133	able	2.62	2.66	.04
1916			2.91	2.86	Defi- .05 cit (9 months)

LEHIGH & WILKES-BARRE COAL COMPANY

Capital stock \$19,210,000. Bonded debt \$14,496,000.

Fiscal year ends June 30th	Annual tonnage sold	Per cent of pre- pared sizes	Average cost of produc- tion	Average price re- ceived per ton	Gross margin of profit per ton
1913	5,678,372	65.00			For 4-year period covered by old wage agreement average margin of profit on fresh mined coal, \$.67.
1914	5,207,047	65.93			
1915	4,738,745	65.88			
1916	4,903,623	65.25			

The Commission has filed, for the purpose of possible legislative reference, more or less complete data from most of the larger operators, with respect to the foregoing factors, all of which would indicate a range of profit from a deficit to sixty seven cents a ton.

Additional data
filed.

By reason of a lack of time and adequate means the Commission has not undertaken to verify any of the figures. It is respectfully suggested, with respect to all of the above, however, that the average margin of profit, per ton, is substantially re-

duced by the sale at a loss of the steam sizes, and it is further suggested in view of the meagre facts so far discovered that the companies themselves may in a large measure be responsible for the small margin of profit in some cases, by having contracted to sell steam sizes at not only less than the cost of production, at which they are doubtless compelled to sell, but in instances at least they have sold to certain favored concerns at considerably less than the current market price. To what extent this has been done your Commission is at this time unable to report, but do find, with respect to the Lehigh Coal & Navigation Company, and the Lehigh & Wilkes-Barre Coal Company that they by a contract entered into on May 7th, 1898, to remain effective for twenty years, that is until April 30th, 1918, agreed to furnish the Lehigh Zinc & Iron Company and the New Jersey Zinc Company with a large quantity of fuel coal, No. 2, Buckwheat, and deliver it at the Zinc Company's plants at Hazzard, Pa., the selling price agreed being 55 cents per ton on such coal shipped from the Lehigh region and 75 cents per ton on such coal shipped from the Wyoming region.

In accordance with the contract the vendees have been furnished with 200,000 tons of fuel coal annually. The standard selling price of this coal f. o. b. mines ranged from 70 cents to \$1.15 per ton of 2240 pounds during the year 1911 and up to as high as \$1.40 a ton in 1915.

The intra-state freight rate to the Zinc Company's plant from the mines in the Wyoming region was 75 cents per ton and from the mines in the Lehigh region 60 cents per ton. The carrier, according to the reports of the Interstate Commerce Commission, 35 I. C. C., 253, has transported this coal at a rate of 29½ cents per ton. It can be readily observed that under this contract the Zinc Companies are deriving an advantage of \$1.00 per ton on 200,000 tons of coal annually.

As opposed to this reasoning on the one hand, it is fair to suggest to the mind of the reader that during the period from 1890 down to 1913 there has been a very perceptible increase as a whole in the percentage of steam sizes, due to the recovery of usable fuel from the culm banks and the saving of small sizes at the breakers by washeries, so that a table setting forth the total production and the average price per ton received must be read at all times with respect to the percentage of prepared sizes in the output. The table below sets out the relative importance of domestic steam and washery anthracite coal shipments annually from 1890 to 1913.

Discrimination
by operators.

Increase in pro-
duction of
steam sizes.

Year.	Per cent of total shipments.		Percentage of washery output (large and small sizes) to total shipments.	Year.	Per cent of total shipments.		Percentage of washery output (large and small sizes) to total shipments.
	Sizes above pea.	smaller.			Sizes above pea.	smaller.	
1890	76.9	23.1	0.11	1902	61.0	39.0	6.28
1891	75.7	24.3	.21	1903	63.6	36.4	6.00
1892	76.0	24.9	.22	1904	62.0	38.0	4.87
1893	74.9	25.1	.57	1905	60.9	39.1	4.31
1894	73.7	26.3	1.53	1906	59.1	40.9	6.91
1895	69.9	30.1	2.52	1907	58.6	41.4	6.41
1896	70.3	29.7	2.07	1908	59.3	40.7	5.64
1897	68.5	31.5	2.39	1909	58.1	41.9	5.26
1898	67.3	32.7	2.69	1910	58.5	41.5	5.02
1899	66.1	33.9	2.87	1911	59.2	40.8	4.50
1900	64.7	35.3	4.57	1912	60.6	39.4	4.84
1901	64.2	35.8	4.79	1913	61.6	38.4	2.93

Preliminary
conclusions.

Having in mind or endeavoring to so have no prejudice in this matter, your Commission is of one mind with respect to the operating end of the anthracite business, in so far as apparent profits are concerned. In reaching this conclusion it has been necessary to have before us at all times the fact that the production of anthracite coal necessitates the keeping of the market price of the fuel at such a figure as to enable those least favorably situated to produce and sell at a fair profit. There are instances where the profits seem to be out of proportion even when considering the tremendous capital invested and the hazards of the business, because of the fact, largely your Commission believes, that these operators must naturally receive the benefit of a prevailing price, for were they to so reduce their price as to make their margin of profit per ton equal to the profit enjoyed by operators less favorably situated, the only possible solution would be the complete elimination of the smaller and less favorably located and, in most instances, independent operators. With the question of additional profits indirectly enjoyed by many of the larger companies, through their affiliation with the railroads, we shall deal in so far as we believe we have any right to go, under a subsequent heading of transportation costs.

PENNSYLVANIA STATE TAX.

Effect of State
tax.

Under the second general heading of the cost of production, etc., your Commission believes might properly come a discussion of one phase of the investigation with respect to the effect of the Roney Tax Act of June 27, 1913, which was in effect until June 1, 1915, and of the Dawson Act of June 1, 1915, which is still in effect.

The Roney Act has since been declared unconstitutional by the Supreme Court of Pennsylvania, in an opinion handed down October, 1915.

Amount of tax
imposed.

By the provisions of the Roney Act, which is set out in full in the early pages of the report, the tax which amounted in round figures to ten cents a ton on prepared sizes and to five cents a ton on steam sizes, was imposed upon the operator based on the value of the coal prepared for market.

By many operators the tax so imposed was added to the price of the coal as a separate item and was so billed to the selling agents and by them to the retailer. In a few instances no tax was added and in a few instances the tax was added without being separately itemized. These various practices continued,

with respect to both the Roney Act and the Dawson Act, in a general way, until January 1, 1916, at which time the tax in every instance ceased to be added as a separate item, but the price of coal was maintained at a price which included both the regular January price and an amount equivalent to the tax.

Practice of operators with respect to tax.

The operators have attempted to justify this addition to the January price by reason of an increased cost of production, due to the effect of the Workmen's Compensation Act, the cost of which to the operators on one year's trial carried in a variety of ways, has varied from two cents to nine cents per ton.

Reasons offered by operators.

Very early in the course of the investigation, your Commission sought to secure a return of the amount collected under the Roney Act, since declared unconstitutional, but which moneys were still in the hands of the operators, to the retailers and others from whom the money had been received.

Return of money collected.

In this effort the desires of the Commission have met with a cordial response on behalf of the operators, to the end that in every instance where money was collected under the Roney Act and held by the operators, the same has either been returned or is in the course of being returned to the parties from whom it was received.

Of a total of \$1,029,143.88 collected by the Philadelphia & Reading Coal & Iron Company, the sum of \$940,000 has actually been returned and the balance awaits the proper claiming by the retailers. Of \$677,996.63 collected by the Lehigh Valley Coal Company under the Roney Act, the sum of \$550,559.05 has been returned and like proportions of the amount collected by other operators has been and is being returned.

Your Commission has no desire to claim credit for having accomplished the return of these moneys, inasmuch as assurances had been sought from the Attorney General by various of the operators with respect to this matter at or about the time of the actual appointment of the Commission, but the Commission does believe that its prompt investigation of this matter did result in expediting such return and in stimulating to make this return some operators, at least, who, until that time had shown no indication of so doing.

Effort to secure return.

The table below will show with respect to the operators from whom we had received accurate replies the amount of tax collected under the Roney Act and the amounts returned by them up to November 1, 1916.

REPORT OF PENNSYLVANIA ANTHRACITE COAL COMMISSION.

Operator.	Amount Collected.	Amount Returned.
P. & R. Coal & Iron Co.....	\$1,029,143.88	\$940,000.00
Lehigh Valley Coal Co.....	677,996.63	550,559.00
Lehigh Coal & Nav. Co.....	269,214.87	257,044.16
Susquehanna Coal Co.....	595,648.33	508,888.71
Penna. & Hillside.....		581,906.37
Lehigh & Wilkes-Barre Coal Co..	636,678.53	632,114.53
Pine Hill Coal Co.....	22,870.60	16,460.82
Oak Hill Coal Co.....	10,553.76	9,543.12
Thorne, Neale & Co.....	31,033.65	17,492.12
Temple Coal Co.....		55,000.00
Locust Mountain Co.....		2,948.74
Dodson Coal Co.....		13,353.12
Chas. M. Dodson Co.....		6,919.26

In addition to the above, your Commission, as its correspondence will show, has been advised by many operators that the entire amount collected has been refunded and the operators upon this assurance have requested that they be not called upon to divulge the names of the parties to whom the return was made, together with the amount, because of its being a trade secret. Where the Commission has received such assurances no further demand has been made with respect to this phase.

Your Commission is assured that upwards of five million dollars has been returned to retailers on account of the unconstitutionality of the Roney Act.

With respect to the disposition made of this five million dollars by the retailers, your Commission called before it, at various places in Pennsylvania, representative retail dealers and inquired of them what had become of the money so returned. In every instance, except where there had been a special contract by the terms of which it was provided for the return of this tax to the consumer, in the event that the Act were unconstitutional, your Commission finds that the retailers retained the amount returned to them.

The universal explanation offered by the retailers in explaining their failure to refund the amount of this tax to the consumer, was that there had been no increase made by them to the consumer as a direct result of the increased price at the mine on account of the tax. They sought to explain the increase generally made in December, 1913, by retail coal dealers in the sum of twenty-five cents a ton, as having been occasioned by a general increase in the cost of labor and supplies and that without which increase so occasioned they would have been unable to continue their operations. The answer universally given by these retailers was, that they were forced to absorb the increased cost to them, due to the tax, by reason of the absorption thereof by their competitors. Your Commission believes and therefore so finds that there was occasion for the retailers to increase the price of an-

Disposition of
money so re-
turned.

thracite coal in December, 1913, but also believes that this increase was in part occasioned by the increased cost to them due to State tax and further believe that the refunds made to them by the operators were in a large part unexpected and that the five million dollars so represented, in a very large measure, swelled the profits of the retailers in that amount mostly unexpected by them.

There is no tangible indication from the testimony before your Commission either in whole or in part, that convinces us of any unlawful combination on the part of either operators or retailers to take advantage of the State tax and to unlawfully conspire to raise the price of anthracite coal by reason thereof.

No indication
of conspiracy.

CAUSES OF INCREASE.

Considering the very substantial increase in the cost of anthracite coal to the consumer ultimately and to the producer in the first place, and in the cost of distributing the coal to the consumer, your Commission has sought to discover whether such increases have been in any sense justified and in considering this phase have taken up or sought to do so the various factors entering into the cost.

The first of these factors is necessarily that of the miner and his wages, which in the past decade have been covered by the wages agreements of 1903, 1909, 1912 and 1916. The table presented herewith, showing the issues, the agreements and awards, will indicate in a general way, the increased wages paid to the miner under the various agreements and the increased cost to the operators can be gathered as well.

Effect of wage
agreements.

Demands of union and results of award or agreement in—

Issues.	1903	1909	1912	1916
I. Wages:				
(a) Rates and scale.	Demands: 20 per cent increase upon prices paid in 1901 to employes preferring contract or piece work; minimum of 60 cents per ton of 2,240 pounds.	Demands: 10 per cent increase for all employes receiving \$1.50 or less per day and 5 per cent increase for all receiving over \$1.50 and under \$2 per day.	Demands: 20 per cent increase for all employes over and above rates of 1903; minimum wage of \$3.50 per day for miners and \$2.75 for laborers on consideration work.	Demands: 20 per cent increase on all wage rates now being paid in the anthracite coal field.
	Award: 10 per cent increase to all employes, except 5 per cent for material-hoisting engineer, other engineers and pumpmen, the last-named together with firemen to receive 10 per cent increase from Nov. 1, 1902, to Apr. 1, 1903.	Agreement: Rates paid for new work not to be less than rates paid under 1903 award for all work of a similar kind or character.	Agreement: 10 per cent increase over 1903 rates and wage scale; contract miners and laborers when working on consideration to be paid not less than the rate paid company miners and laborers at the mine where the work is being performed; rates paid by contract miner not to be less than the standard rate for that class of work.	Agreement: 7 per cent increase over 1912 rates for all contract miners and all company men working on eight hour day prior to April 1, 1916, excepting hoisting engineers, who shall get 3 per cent increase over 1912 rates.
(b) Methods of payment.	Demands: Weight of ton to be 2,240 pounds; adoption of system by which coal can be weighed wherever practicable, the existing differentials to be maintained.	Demands: All coal to be mined and paid for by ton of 2,000 pounds; uniform payments to be issued by employers.	Demands: All coal to be mined and paid for by ton of 2,240 pounds wherever practicable; uniform payment for props; check weighmen and check docking bosses not to be interfered with; abolition of system whereby contract miner has more than one working place or employs more than two has more than one working place or employs more than two laborers; sliding scale abolished.	Demands: Where coal shall be mined on car basis to be weighed and paid for on mine run basis by the ton of 2,240 pounds and refuse cleaned from coal to be paid for on equal basis.

Demands of union and results of award or agreement in—

Issues.	1903	1909	1912	1916	No
(b) Methods of payment — Concl'd.	Award: Sliding scale of wage payments; payment of contract miners' laborers to be direct by company; existing methods of payment for coal mined to be adhered to; any increase in size of car or in topping to be accompanied by proportionate increase in rate paid per car; check-weighmen and check docking bosses to be provided by miners when desired; distribution of mine cars must be equitable.	Agreement: Pay statements to be issued by employers.	Agreement: Work of check weighmen and check docking bosses not to be interfered with, provided they do not interfere with operation of colliery, and they must be elected by contract miners in meeting specifically called for the purpose.	Agreement: provision.	
II. Hours.	Demands: 20 per cent reduction in hours of labor without any reduction of earnings for all employees paid by the hour, day, or week.	Demands: 8-hour day, with no reduction of wages.	Demands: A work day of not more than 8 hours for outside day labor, with no reduction in wages.	Demand: A work day of eight hours.	
	Award: 8-hour shifts for engineers, firemen, and pumpmen, with no reduction in wages and Sundays off at company's expense; other employees to be paid on basis of 9-hour day the same wages as received for 10-hour day, with overtime in excess of 9 hours.	Agreement: No provision.	Agreement: No provision.	Agreement: Eight hour day.	
III. Recognition of Union: (a) Recognition as party to wage contract.	Demand: Agreement between United Mine Workers of America on wages and conditions of employment.	Demand: Agreement and complete recognition of United Mine Workers of America to negotiate a wage contract.	Demand: Recognition of United Mine Workers of districts 1, 7, and 9 as a party to negotiate a wage contract.	Demand: Full and complete recognition of United Mine Workers of America, and districts 1, 7, and 9.	

REPORT OF PENNSYLVANIA ANTHRACITE COAL COMMISSION.

Demands of union and results of award or agreement in—

Award: No recognition except "an organization representing a majority of the mine workers" in each district as authority to name member of board of conciliation; violations of award not to invalidate any of its provisions.	Agreement: No recognition except of "representatives of the anthracite mine workers" as party to agreement.	Agreement: No recognition except of "the anthracite mine workers' organization" as party to agreement.	Agreement: Recognition of districts 1, 7, and 9, representing the Anthracite Mine Workers Organization.
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Issues.	1903	1909	1912	1916
(b) Recognition of right to collect union dues.	Demand: None stipulated.	Demand: Right of United Mine Workers of America to collect union dues as it pleases.	Demands: Right to provide a method for the collection of revenues for the United Mine Workers of districts 1, 7, and 9.	Demand: None stipulated.

Award: No provision.	Agreement: Provisions of board of conciliation as to union dues and posting of notices were ratified.	Agreement: No provision.	Agreement: No provision.
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(c) Discrimination on account of union.	Demand: None stipulated in formal demands, but made against discrimination in conference.	Demand: None stipulated in formal demands, but made against discrimination in conference.	Demands: None stipulated.	Demand: None stipulated.
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Award: No discrimination allowed on account of union or nonunion affiliation by employers or union.	Agreement: Employee discharged for being member of union to have right to appeal to conciliation board.	Agreement: No provision.	Agreement: No provision.
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Demands of union and results of award or agreement in—

Issues.	1903	1909	1912	1916
IV. Methods of Settling Disputes (Conciliation and Arbitration).	Demand: In agreement to provide satisfactory methods for the adjustment of grievances.	Demand: Adjustment of disputes arising under wage contract according to provisions of the agreement.	Demand: A more uniform and convenient system of adjusting local grievances within a reasonable time; arbitration by federal authority in case agreement failed to be made.	Demand: A more simplified, speedy and satisfactory method of adjusting grievances.
	Award: Establishment of joint conciliation board of three miners' representatives and three operators' representatives and arbitration by umpire to be appointed by a judge of the Third United States judicial circuit.	Agreement: Dispute at any colliery to be first taken up with the local mine executive before being taken to the board of conciliation.	Agreement: Provision for grievance committee of not more than 3 employees which must (1) take up grievance with foreman; (2) with company officials; (3) with members of conciliation board for district; (4) with entire board for final settlement or reference to umpire. The committees to meet with company officials and prepare statement of wages for use of board. District members of board elected by miners may sit with grievance committees.	Agreement: Provision for board of conciliation to render decision within 60 days unless time is extended. If no decision, board to submit case to the umpire as provided in award of anthracite coal strike commission.
V. Length of Agreement.	Demand: None stipulated in formal demands.	Demand: One year agreement.	Demand: One year.	Demand: Two years.
	Award: Three years (the awards of 1903 were continued in the 1906 agreement for another three years).	Agreement: Three years.	Agreement: Four years.	Agreement: Four years.

It may be noted in passing that the new wage agreement of 1916 occasioned an increased cost per ton to produce of approximately 25 to 30 cents, depending on the tonnage produced daily in eight hours.

Increased cost
of materials
and supplies.

The next material factor with respect to the operators end of the transaction is the increased cost of materials and supplies. The following table, showing the cost of various materials in 1912 and the corresponding price in 1916, and the increase in per cent, will serve as an index of the general increase to the operators with respect to this phase of the cost of production.

MATERIAL.	PRICE.		Per Cent Increase.
	1912.	1916.	
Copper rivets and burrs.....	\$.25	\$.38	.520
Proof chain machine made.....	3.15	4.00	.270
Mine car axles.....	2.90	3.25	.121
Davy safety lamps.....	10.50	15.00	.429
Steel wire rope hemp centre.....			
	Discount 60.5 per cent	45 12½ and 5 per cent	.203
Manilla rope.....	.11	.205	.864
No. 1 hemlock.....	18.00	22.00	.222
Mine plank hemlock.....	14.80	17.00	.149
Machine bolts.....	80.02½	70 per cent	.530
Dynamite 60 per cent.....	13.90	21.50	.547
Do. 50 per cent.....	12.70	19.00	.496
Do. 40 per cent.....	11.50	16.50	.435
No. 1 carbonite.....	10.50	13.75	.310
Exploders 6 ft.....	4.04	5.95	.371
Blasting caps.....	8.25	20.00	1.424
Cases D T fuse.....	4.85	6.00	.237
Iron cut nails.....	1.63	2.22	.362
H H spikes 4½x7-16.....	1.58	2.48	.570
Steel T rails 25 lb.....	24.60	34.82	.415
Refined iron.....	1.30	2.005	.542
Brattice cloth.....	.165	.1825	.106
Cotton waste.....	.065	.0775	.192
Cement per bbl.....	1.31	1.75	.336
Sheet steel.....	1.68	2.958	.761
Harness leather, oak tanned.....	.38	.46	.210
Harness leather, hemlock tanned...	.27	.34	.259
Cast iron fittings.....			25 to 42 per cent
Wrought iron black gas pipe.....	.36	.37	.271
	71 per cent	64 per cent	
Globe valves.....	50 per cent	40 per cent	.200
Steel segments 1-8 to 5-32.....	.0475	.0575	.210
Do. 3-16 to 3-8.....	.04	.05	.250
Do. 7-16 to 15-16.....	.0375	.0475	.267
Do. 1 in. and larger....	.035	.045	.286
Bronze segments 1-16 in.....	.29	.43	.483
Do. 3-32 in.....	.28	.43	.535
Do. 1-8 in. and larger	.27	.41	.518
Red brick.....	7.15	8.00	.119
Fire brick.....	20.65	26.70	.293
Oils, 300 deg. miners.....	.06	.075	.250
Oils, W. W.....	.08	.09	.125
Oils, cottonseed .....	.48	.79	.645
Oils, sperm .....	.79	.85	.076

PUMP REPAIRS.

MATERIAL.	PRICE.		Per Cent Increase.
	1912.	1916.	
Bronze shells	\$.25	\$.31	.240
Plunger Goyne 28x10x36.....	20.00	22.00	.100
Standard mine steel timber 1b.....	.0157	.0320	1.038
No. 14 R C wire.....	5.75	9.10	.583
1-0 bond wire.....	17.30	30.55	.766
4-0 trolley wire, grooved.....	17.80	30.80	.730
F O feed	33.75	34.50	.022

Another item tending to cause an increase in the cost of production is the item of Workmen's Compensation carried by the various operators, under the Act of 1915. Your Commission hesitates to set out the figures compiled by it during the brief period in which Workmen's Compensation has been in effect, inasmuch as the companies are experimenting somewhat with the best way of carrying the same. Some are charging off five cents a ton, others are carrying it with insurance companies from whom they hope to obtain a dividend and the average of losses sustained can hardly be properly arrived at on such short a test as six months' experience under the Act will give. Your Commission believes, from the testimony before it, that the expense to the operator will amount at least to the sum of five cents a ton and has filed with its original report all of the testimony with respect to this item.

The cost of
Workmen's
Compensation.

In addition to the items already set out, the item of increased taxation is one which the operators have put forward as a reason for the increase in the cost of coal. It is impossible in this report to take up this phase with respect to every company concerned but the sworn testimony of officers of the Lehigh Valley Coal Company is to the effect that their taxes in the County of Luzerne have increased from \$3,000 per superficial acre to ten or twelve thousand dollars per superficial acre for the purpose of local taxation with an ever increasing rate, from 1910 to 1916.

Cost of in-
creased taxa-
tion.

The testimony of the president of the Lehigh & Wilkes-Barre Coal Company (page 338 of the Commission's testimony), is to the effect that during the four year period from 1912 to 1916, taxes were running at twenty-one cents per ton of output. Since the new wage agreement went into effect and taking the figures as near as they can prophecy them taxes are presently running at about thirty-five cents per ton of output.

The Commission is of opinion that the three foregoing factors, to wit, the increased cost of labor, the increased cost of supply and increased taxation must necessarily reflect themselves upon the price of anthracite coal to the disadvantage of the consumer, and the Commission is further of opinion that with respect to none

of these items can the operators be charged with blame.

Further in-
creased cost of
production.

Even in addition to the above it is conceded that with the exhaustion of the richer and more easily worked veins of anthracite coal it has been necessary for the operators to sink their shafts deeper and to drive their gangways and tunnels to a much greater distance laterally. Without great improvements in methods and appliances this tends to cause a number of increased expenses of operation.

In working the thinner veins it is necessary to remove a much greater amount of rock and refuse (dead work) than was necessary a very few years ago.

Cost of remov-
ing water.

With every increase in the depth of the mine and the area which is covered by the workings there is a considerable increase in the amount of water which must be removed from the mines and also in the cost of its removal. New underground springs are being continually encountered and water from this source, as well as the natural seepage, must be removed from the mine with absolute regularity. The method of removal consists briefly in allowing the water to flow down by gravity to the very bottom of the mine, where it is collected in a large pit or "sump," from which it is removed either by pumping, or by a tank hoist. Since the water must be raised from the very bottom of the mine, every increase in the depth of the mine considerably increases the cost of removing the water. In some of the collieries in the anthracite region as much as 16 tons of water are removed for every ton of coal hoisted.

Cost of length-
ening gang-
ways.

With the continual lengthening of the gangways the cost of ventilation and of inside transportation and of hoisting increases very rapidly. The increased length of track very considerably increases the cost of inside repairs and maintenance, while the elaborate devices necessary to carry the air to the face of the most distant workings are very expensive and difficult to maintain in perfect condition.

Cost of mining
thin veins.

In addition to the tendency to ever-increasing costs in mining the deeper veins, it is necessary to consider also that many of these veins, which must be removed in the regular course of mining in order to properly conserve the supply, are so thin that it would have been considered bad business policy to mine them even ten years ago. The tendency to increased cost in mining the thin veins is a result of several factors which may be briefly described. (1) Since the chambers in which the men work must be sufficiently high to allow a man to stand up comfortably and to permit the passage of loaded mine cars where the vein is not on a pitch, it is necessary in mining a $2\frac{1}{2}$ foot vein (containing

2 feet of clean coal) to blast out and handle about $4\frac{1}{2}$ feet of rock, slate and other refuse in addition to that contained in the vein itself. (2) While all of this large amount of refuse does not have to be transported to the surface, a large amount of additional labor is necessary to dispose of it inside the mine. (3) Furthermore, an additional rate must be paid the miner for each foot of rock removed in this manner. (4) Finally, the thin veins are much more liable to "pinch out" or to develop "faults" than the thicker and more uniform veins.

In addition to the mining of thin veins a considerable part of the anthracite supply at the present time is obtained by the removal of the pillars of coal, which must be left to support the roof until an area is practically worked out. The so-called "robbing" or "second mining" is very much more expensive, as it is also more dangerous than the original process of mining. Furthermore, the supply of coal reclaimable by "second mining" is greatly decreased or rendered very expensive by the fact that the operators who originally worked the field failed in many cases to "columnize" the pillars in the different levels so as to rest one above the other as in a properly constructed house. As a result the roof has in many cases subsided, not only crushing the coal in the pillars, but rendering large areas practically inaccessible.

Cost of "second mining."

The situation with respect to the class of labor employed has also conspired to produce a smaller output than might be consistently expected from past records. The nationalities of the people now most actively engaged in the actual work of mining is confined largely to those from Greece, Armenia, Italy, Ireland, Russia, Poland and Hungary; these peoples have different holidays which they celebrate, which necessitates a very considerable reduction of the maximum annual tonnage, and the efficiency has apparently been impaired.

Impairment of efficiency.

In addition to the recognized legal holidays, such as New Year's, Lincoln's Birthday, Washington's Birthday, Decoration Day, Independence Day, Labor Day, Columbus Day, Thanksgiving and Christmas, the following named holidays necessitates idleness on the part of those interested therein:

Russian Christmas (January 7).
 St. Patrick's Day (March 17).
 Good Friday (March or April).
 Easter Monday (March or April).
 Russian Easter Monday and continuation (April).
 Eight Hour Day and continuation (April 1).
 Druid's Day (August 10).
 Catholic Total Abstinence Union Convention Day (August).
 Father Matthew Day (October 10).
 Mitchell Day (October 29).
 Election Day (November).
 Forty Hours Devotion (any time of the year designated by the

Roman Catholic bishop of the diocese).

Polish holidays and beginning and continuation (January 6, January 19, February 2, March 25, May 27, June 1, June 29, August 15, September 8).

GENERAL CONCLUSIONS.

General conclusions.

With respect to the second general sub-division, as set out in the analysis of the whole investigation, *i. e.* to a detailed report of the cost of producing anthracite coal, the profits of the operators and whether such increases in the price of anthracite coal as have been occasioned by the operators have been justified or not, your Commission is impelled to the conclusion, from all of the facts and testimony before them, that the percentage of increase in the price of anthracite coal has not been disproportionate to the increased cost of production of anthracite coal.

THIRD. THE COST OF TRANSPORTING; THE PROFITS OF THE CARRIERS AND THE QUESTION OF A SOLUTION OF THE HIGH COST OF SUCH TRANSPORTATION TO THE PUBLIC.

In considering this phase of the investigation, it must be constantly borne in mind that with the question of existing freight rates your Commission has nothing to do, and that probably no comments that we may make upon the same would be of much service to the Legislature or would move the conscience of the carriers.

The question is most fully set out in the opinion of Commissioner Pennypacker in the action of the City of Philadelphia, Harry E. Bellis, et al. vs. the Philadelphia & Reading Railway Company, et al., submitted to the Pennsylvania State Railroad Commission, October 7, 1912, and decided by the Public Service Commission December 18, 1914. From this opinion and decree an appeal was taken, which we are advised, has only recently come to the attention of the Attorney General's Department and is now being actively pushed toward a final determination.

Bellis, et al. vs.
P. & R. Co., et
al.

The present rates upon anthracite coal from the Schuylkill district to Philadelphia and consigned for local delivery there are the same upon both the Pennsylvania Railroad and the Philadelphia & Reading Railway, and are as follows per gross ton of 2,240 pounds:

For prepared sizes.....	\$1.70
For Pea coal.....	1.40
For sizes less than Pea.....	1.25

The Philadelphia & Reading Railway Company transports anthracite coal from the Lehigh region to Philadelphia for local delivery, by arrangement with the Central Railroad Company of New Jersey and the Lehigh Valley Railroad Company. The totals of the proportional rates so charged upon the gross ton are as follows:

For prepared sizes.....	\$1.86
For Pea coal.....	1.56
For sizes less than Pea.....	1.41

The Pennsylvania Railroad Company transports anthracite coal from the Lehigh region to Philadelphia for local delivery by

arrangement with the Lehigh Valley Railroad Company and the Central Railroad Company of New Jersey. The rates per gross ton are as follows :

For prepared sizes.....	\$1.75
For Pea coal.....	1.45
For sizes less than Pea.....	1.30

The actual cost of such transportation to the carriers is set out quite fully and at large in the various cases brought by the Government against the carriers and with which this Commission we believe has nothing to do.

It is important, however, to note in connection with the fact that some of the large operators are apparently conducting their operations at a very small profit that these operators are in many instances by stock ownership affiliated with carriers who are enabled to haul at very considerable profits the vast tonnage from these operations.

Without going further into detail, with respect to the manner in which it is done, it has been found and the finding has been sustained by the Supreme Court of the United States in a recent case, that the Reading Company, from which the Philadelphia & Reading Railway Company leases its equipment, owns or controls forty-four per cent, the Lehigh Valley Railroad Company sixteen and eighty-seven hundredths per cent, the Delaware, Lackawanna & Western Railroad Company six and fifty-eight hundredths per cent, and the Central Railroad Company of New Jersey nineteen per cent, or altogether eighty-six and forty-five hundredths per cent of all the unmined anthracite coal.

The manipulations of stock ownership and control made necessary to accomplish this condition furnish most interesting reading but are hardly essential to the investigation before this Commission.

Affiliated companies.

CANAL TRANSPORTATION.

We are of the opinion, however, that two facts are important and necessary to an understanding of the discussion in the following pages.

There are two existing water routes from the anthracite coal fields to Philadelphia, one of these owned and controlled by the Lehigh Coal & Navigation Company, leading from the Lehigh

Canal routes.

field, and the other owned by the Reading Company, and known as the Schuylkill Navigation Company.

The Lehigh Navigation Company with a capital of \$50,000, was formed August 10, 1818, to undertake an improvement of the Lehigh River and up until 1829 the descending navigation was accomplished by artificial freshets. There was, of course, under this method, no ascending navigation, so that in 1827 it was decided to change the Navigation on the Lehigh River into a slack water navigation, which work consisting of the Lehigh Canal extending from Mauch Chunk to Easton, forty-six miles, was completed in July, 1829. The Lehigh Coal & Navigation Company being a consolidation effected in 1822 and desiring to further improve their facilities for reaching Philadelphia, applied to the Legislature for authority to construct a Delaware division canal which became available in 1832.

Lehigh Canal.

From the Schuylkill field the construction of a canal was commenced in 1816 and completed to a length of 108 miles in 1825, so as to permit boats to go all the way from Pottsville to Philadelphia.

Schuylkill Canal.

The table below shows the number of shippers and the shipping of coal over the Schuylkill Canal from the year 1825 down to 1833.

Years	Under 50 tons	50 to 300 tons	300 to 100 tons	1,000 to 4,000 tons	4,000 to 10,000 tons	10,000 to 20,000 tons	Above 20,000 tons	Total quantity shipped	Whole number of shippers in each year
1825	13	14		1				5,306	28
1826	24	24	8	3	1			16,835	60
1827	37	21	8	5	2			29,493	73
1828	23	23	5	8	1	1		47,181	61
1829	50	39	6	10	5		1	78,293	111
1830	117	96	16	14	4	1		90,381	238
1831	117	93	20	11	6			79,348	247
1832	80	109	16	27	11	1	2	208,492	246
1833	96	121	28	20	8	4	3	254,895	280
Total	557	540	107	99	38	7	6	810,224	

The next table sets out the receipts in tons over both the Lehigh and Schuylkill Canal of anthracite coal from 1820 to 1834 and the retail prices in Philadelphia per ton, delivered.

Year.	Receipts of Lehigh.	Receipts of Schuylkill.	Retail prices in Philadelphia per ton delivered.	
			Lehigh.	Schuylkill.
	Tons.	Tons.		
1820	365	.....	\$8.40	.....
1821	1,073	.....	8.40	.....
1822	2,240	.....	8.40	.....
1823	5,823	.....	8.40	.....
1824	9,541	.....	7.33	.....
1825	28,393	5,306	7.33	.....
1826	31,280	16,835	7.33	.....
1827	32,074	29,493	7.00	\$6.50
1828	30,232	47,181	6.50	7.00
1829	25,110	78,293	6.50	6.50 7.50
1830	41,750	89,984	6.50	6.50
1831	40,966	81,854	6.00	5.00 10.00
1832	75,000	209,271	6.00 6.50	5.50 7.50
1833	123,000	250,588	6.00	5.50
1834 .....		.....	4.75 5.25	5.25
	446,847	808,805		

History of
Schuylkill
Canal.

Notwithstanding the tonnage transported by these canals and the fact that up until after the Civil War period satisfactory dividends were paid by both of them and that even then they were able to compete with the railroads coming into their territory they both early fell into the hands of competing carriers and on July 12, 1870, the Schuylkill Navigation Company leased all of its property to the Reading, and whereas in 1869, a year prior to the lease, over a million tons of freight, mainly anthracite, moved by the canal. In 1911 the total tonnage was only 72,600, all of which was anthracite coal.

History of
Lehigh Canal.

On March 28, 1871, the Lehigh Coal & Navigation Company leased all its railroad property to the Central Railroad of New Jersey, giving also an option on its canal, including the Delaware Division Canal. In 1878 it returned to the Navigation Company all its properties, with the exception of the railroad, which under the Navigation Company's own management has seen traffic on the canal decline because of greater importance of other interests, until in the year 1915 the canal expenses exceeded the revenue, apart from depreciation charged off, by the sum of \$15,951.61 according to the annual report of the Lehigh Coal & Navigation Company.

Possibility of
reduced trans-
portation costs.

The further discussion of this question with respect to the feasibility of transporting anthracite coal over the existing canal routes or by a canalization of either or both of the two river routes is without respect to the many serious legal questions involved, among which are the liabilities of the canal companies to do more than furnish water transportation at certain rates or their liabilities to widen, deepen and enlarge their canals and many other equally important questions.

Responsible persons possessing very considerable knowledge and experience have indicated to the Commission at its hearings, ideas with respect to this which the Commission believes are worth considering by the Legislature and in justice to those from whom the ideas sprung, we are embodying in the report the testimony of William A. Magee, a member of the Public Service Commission of the Commonwealth of Pennsylvania, as follows:

**PROCEEDINGS OF COMMISSION TO INVESTIGATE
THE INCREASE IN THE COST OF ANTHRACITE COAL
IN THE COMMONWEALTH OF PENNSYLVANIA.**

The Commission met in the Senate Caucus Room, Capitol, Harrisburg, Pa., on Friday, December 1, 1916, at 2 o'clock p. m.

Present:

Hon. Robert S. Gawthrop, Chairman of the Commission.

Commissioners Edwin J. Lafferty and John Langdon.

J. Paul MacElree, Esq., counsel for the Commission.

Hon. William A. Magee, member of the Public Service Commission of the Commonwealth of Pennsylvania.

Samuel Dexter Warriner, president of the Lehigh Coal & Navigation Company.

William Jay Turner, Esq., counsel for the Lehigh Coal & Navigation Company.

Mr. MacElree: This hearing is held for the purpose of having the Commission informed by Mr. Magee of any facts relative to the possible transportation of coal, by means of other routes than those now in active use and operation, and of affording the representatives of the two canal companies an opportunity to put upon the record any facts that may be in their minds relative to the same proposition.

WILLIAM A. MAGEE, having been duly sworn, was examined and testified as follows:

By Mr. MacElree: Q. Now, Mr. Magee, if you will be good enough to advise the Commission of what you have in mind relative to the possibilities of transportation of anthracite coal by the existing canal routes, or by the possible canalization of the river routes, we will give you strict attention.

A. If you would permit it, I would like to read something I

have prepared, and then I am willing to answer questions or supplement that with statements of my own later on:

“The carriage of 11,000,000 tons of bituminous coal annually on the Monongahela, a slack-watered stream—nine feet deep—in 600 ton barges at a cost of not more than one mill per ton mile justifies a full investigation of the possibilities of canal or canalized river transportation in the valleys of the Schuylkill and the Lehigh-Delaware rivers of the 15,000,000 tons of anthracite shipped yearly to Philadelphia.

“Such transportation might be limited to only eight months in the year as Mr. Warriner says, and there may probably be an irregularity of stream flow that would necessitate impounding reservoirs such as the Hinkley dam on the barge canal in the State of New York. Also it must be conceded that tolls should be imposed large enough to pay the expenses of operation, taxes, depreciation and a fair return upon the capital invested whether the improvements are effected out of private or public funds. Furthermore, it must not be forgotten that a short rail haul from the collieries to the canal boats and a terminal handling in the city would add other expenses to the operation.

“The lowest railroad rate upon anthracite for prepared sizes to Philadelphia is \$1.70. This is from points in the Schuylkill region. From more remote districts the rate is as high as \$2.10 per ton. I would advance, tentatively, the following probable maximum water costs for comparison:

Rail haul from colliery to canal an average distance of 20 miles	
at 1 cent per ton per mile.....	20 cents
Boat haul to Philadelphia 120 miles at 1 mill per ton per	
mile	12 cents
Tolls on canal.....	30 cents
City terminal expenses.....	8 cents
	<hr/>
Total	70 cents

“I do not wish it to be understood that I infer a saving of one dollar on every ton of coal shipped, because I frankly confess my ignorance of the relative quantities of pea coal and lesser sizes shipped out of the Schuylkill region at rates less than \$1.70 and on the other hand of the quantity of prepared sizes from the other regions at much higher rates than \$1.70. And I do not wish to be bound in the last analysis to my computation of water costs, which are all higher and more liberal than the actual figures, taken from like operations in similar traffic movements elsewhere. My purpose here is merely to suggest an engineering investigation.

“You have two large streams traversing the entire distance between the Schuylkill district and Philadelphia and on the banks

of each these streams is an antiquated canal. The Schuylkill Navigation Company is owned by the Reading Company and the Lehigh Coal & Navigation Company is the owner of a very large railroad mileage in the anthracite district. These two canals are very shallow and of little width. These barges operating on them have a capacity of not exceeding one hundred tons. An examination should be made of the feasibility and advisability of their enlargement, including an estimate of the cost of the improvement and of operating them. It would be necessary not only to widen and deepen them, but to enlarge their locks, probably lengthen their pool levels, install higher lifts, alter and re-locate overhead bridges, provide improved modern terminals, prepare for connection with intersecting railroads, etc.

“On the assumption that the narrow space on the river banks would not permit of the modernizing of these canals, a parallel investigation should be made with a view to canalizing the rivers themselves, and the cost of effecting the improvement.

“I am induced to appear here also because of the expressed belief—this, parenthetically, is an editorial in a Philadelphia newspaper—that full relief can be obtained by a reduction of railroad rates through the Public Service Commission and the Courts. This opinion will not bear analysis. Firstly, rail transportation expenses are necessarily higher than water costs when favorable conditions exist for the latter as here; secondly, no regulating body can determine exactly what the real expenses of hauling anthracite are by rail because of the impossibility of apportioning the total expenditures of a railroad over each and every part of its miscellaneous traffic; thirdly, even though the anthracite rail haul expenses were approximated by guess or rough calculation, a rate based on that theory would not be upheld. In passing upon the justice of rates both legalistic and economic theory dictate the consideration of other elements besides the actual cost of the services. Sound public policy and correct railroad operating policy may justify other freight movements at less relative return. Regulating bodies and Courts always allow a very large margin of safety in passing upon rates when the demand for a reduction is based principally upon cost of service.

“A fourth and more conclusive argument against the hope of permanent and complete relief for Philadelphia from the railroads themselves through the compulsory processes of the law is the fact that the effort to bring this about in the interest of the consumers of New York was made fifteen years ago and failed utterly. Since 1902, when the Hearst petition was filed with the

Interstate Commerce Commission against the Anthracite coal combination, so called, the Interstate Commerce Commission, and since 1906, after the Hepburn bill was enacted in Congress, the Attorney General of the United States and the Federal Courts, have been trying to determine under the Sherman anti-trust law and the commodity clause of the Hepburn Act whether or not the anthracite coal business as conducted and controlled directly and indirectly by the railroads, constituted a monopoly. Thousands of pages of testimony have been taken by the Interstate Commerce Commission, numerous suits have been filed in the Federal Courts and decided there, only to be overruled in whole or in part by the Supreme Court. The net effect of many years of controversy and litigation has been *nil*. But the public knowledge of the relations existing among those who control the production, transportation and distribution of anthracite has been so greatly increased that there are apparently few secrets of those involved which have not been disclosed. Professor Elliot Jones, formerly of Harvard University, in his exhaustive study of the subject, concludes that the quantity of coal mined in the anthracite region directly and indirectly by the railroads is about 91 per cent of the total. Besides having subsidiary mining companies, the railroads maintain associate selling companies, and whether the anthracite coal business is a violator of the law or not, it is so thoroughly integrated, so closely held and controlled and this control has been lodged in so few hands, that for all practical purposes it does constitute an economic monopoly. I am not qualified to express an opinion as to whether this monopoly practices extortion upon the consumer, but I do not hesitate to declare that its power and control of the production, the transportation and selling of its coal is so complete as to allow it to charge extortionate and monopolistic prices if it so chooses to do.

“It is in this integration of the industry that the menace to the public exists. If the chain were broken at the colliery, there would be hope of alleviation. If a means were devised whereby a large number of individuals could be induced to enter the business of transporting and selling the coal competition would ensue. Canal transportation would invite a number of persons or companies to enter and compete with each other in the business of carriage because the capital required would be moderate. The dealer in the cities in turn would not be restricted to two or three selling agencies for his supplies. The results to the consumer would naturally be fair prices, cost plus a fair profit.

“Another effect of fair prices must not be overlooked. These lower market prices would probably establish the port of Phila-

delphia as the predominant point for the shipment of anthracite to New England and for all other coastwise business. It would, too, no doubt, cause an increase in the total consumption. The railroads would not lose all or even most of their present volume of this traffic, but they would be compelled to reduce their charges to economic standards.

"I am careful to avoid expressing any opinion upon the merits of my own proposal in advance of direct evidence in detail as to facts of which I now have but meagre knowledge. The figures that I have given you above as to water transportation costs, I know to be facts and they will bear investigation. I submit that the plans I have outlined, while they may seem revolutionary, are simple and the investigation I have suggested, if made by competent engineers, would determine their practicability within a short time, after which a decision as to what action should be taken could be made by the public through their representatives.

"If the enlargement of one or both of the existing moribund canals were found advisable there is authority in law to compel their modernization. Article II of the Public Service Company law provides that 'It shall be the duty of every public service company . . . to make all such repairs, changes, alterations and improvements in or to such service, including facilities, as shall be reasonably necessary for the accommodation or safety of its patrons, employes and the public.' Article V empowers the Commission 'to require public service companies to make such repairs, changes, alterations, additions, extensions and improvements in and about their facilities and service as shall be reasonably necessary and proper for the safety, accommodation, convenience and service of their patrons, employes and the public.' The term 'facilities' as defined in the Act includes 'all plant and equipment of a public service company which includes all tangible, real and personal property. . . .'

"If the slackwatering of one or both of the rivers were determined to be more feasible and practicable, the public funds should be available for the purpose in analogy with the comprehensive state road improvement. The one is as much a public highway as the other. Private capital to the necessary large amount will never enter into competition with the huge resources and the economic and political power of the anthracite railroad and mine ownership.

"I am not an indiscriminating enthusiast for water competition. The superior mobility of the railroad, the greater speed, the easier terminal handling, the smaller units of transportation

make its place secure in the modern industrial state, but there are exceptional circumstances where nature has provided not only a cheaper method of carriage but a large volume of slow imperishable traffic as well. Where these two elements exist as they do in both the eastern and western parts of Pennsylvania, advantages should be taken of them. And where a strong suspicion exists that monopoly is fostered by creatures of the State, that these beneficiaries of the State have become more powerful than the State itself, the situation constitutes a challenge to the State, which only cowardice will ignore.

“As the Legislature has provided an appropriation for the investigation of a similar situation between the bituminous region and Lake Erie, so should it or the City of Philadelphia make a similar examination of the cost of canalization between the anthracite region and tidewater. The present canals have failed. They probably would not have failed if their development had kept pace with the growth of the railroads. The latter, too, would be failures if they remained of the same dimensions as they were eighty years ago. The president of the Lehigh Coal & Navigation Company is quoted as offering to sell his canal at book value. Book values do not rule in commercial transactions. His canal has an exchange value or it has not. If it should be decided that it can be enlarged and earn a fair return upon the necessary investment, the company will have one of two courses open to it. It should have the first right to improve and operate its property. The other alternative is to abandon the franchise it received from the Commonwealth. If it will not voluntarily do the one thing or the other its grant of privilege should be forfeited. Any other policy would seem like playing dog in the manger. But the obvious policy for the owners of both these antiquated works would be to enlarge them, integrate them with the anthracite railroads under the supervision of the proper public authorities, and provide joint rates between the rail and water hauls, just as joint rates now exist between connecting railroads.

“I am willing, and would like to discuss this further, and merely consider that to be the basis, Mr. Chairman, of a discussion, and I would be glad to answer any questions that are asked.”

Mr. MacElree: I think in the first instance, Mr. Magee, in order to convenience both Mr. Turner and Mr. Warriner, if they have any questions or discussion that they would like to take up relative to it, or any further testimony from Mr. Warriner, or suggestions from Mr. Turner about it, we had better hear them

first, perhaps, because they want to catch this 3 o'clock train.

Mr. Turner: That is to say, if we can. We do not want to inconvenience the Commission.

Might I just call the attention of the Commission, please, to page 172 of the record. There are a couple of corrections that we wanted to make in the testimony. On page 172 Mr. Warriner is reported as saying, "We pay to maintain the boatman, who does this by contract, 84 cents to take it from Mauch Chunk to Bristol." That should be 43 cents. The distance, as I recollect it, is 84 miles.

Mr. Warriner: The distance is somewhat over 84 miles.

Mr. Turner: Also on page 182—that same mistake goes through—where the statement is made "In fact, it is a cent per ton per mile we have to pay to the boatman," it should be "half a cent per ton per mile."

I would also like to have this simply noted on the minutes: Mr. Warriner testified, page 148, that the cost of selling coal was 6.9 cents per ton. That, I would like to have noted, was for the year 1913. I understand there has been some increase in that since. That was the lowest it has ever been.

Mr. Warriner: I was fearful that might give the Commission an erroneous impression. That was the actual cost in that year, and I was not asked the costs in the other years.

The Chairman: Can you give me the costs in the other two years?

Mr. Warriner: I will send them to you. I have not that data with me. I will give it to you for 1914 and 1915.

Mr. MacElree: I think that is perfectly plain from the record as it is, because immediately following that statement we find the following question and answer: "Q. Then I understand you that during the year 1913, during your fiscal year 1913, the average cost per ton to the Lehigh Coal & Navigation Company of selling its output was 6.9 cents per ton? A. 6.9 cents, yes, sir, for that year."

Mr. Warriner: That is correct. We will send it to you for the other two years.

Mr. Turner: I understand that there was some reference made, in a former hearing, to a cost of three-tenths of a mill per ton mile in the Monongahela district, as having come from you, Mr. Magee, and I would like to ask about that.

Mr. Magee: The general operating charge on the Ohio, in one concerns whose costs are known, is less than one cent. In other words, it is about eight or nine mills, or even a little less than nine mills.

Mr. Turner: Per ton per mile?

Mr. Magee: Yes, sir. The actual cost of hauling the coal in 600-ton barges by the Jones & Laughlin Steel Company, from their mines to their blast furnaces, where they manufacture coke out of this coal, a distance of 52 miles, and including the raising of this coal out of the barges to an elevation of about 60 feet and from there conveyed to coal bins, a distance of about 400 feet, is 6 cents per ton.

Mr. Turner: 6 cents?

Mr. Magee: Per ton.

Mr. MacElree: 6 cents per ton for the entire haul and all other charges?

Mr. Magee: Terminal charge.

Mr. MacElree: That is not 6 cents per ton mile, but 6 cents per ton?

Mr. Magee: 6 cents for the carriage of 52 miles and the terminal delivery.

The Chairman: Did you make a statement at any time with respect to three-tenths of a mill per ton mile, or are we in error? I confess I heard that figure mentioned.

Mr. MacElree: I think it was my suggestion to either Mr. Warriner or some other gentleman.

Mr. Magee: That, no doubt, is based upon what I told Mr. MacElree about the investigation of the Lake Erie & Ohio River Canal Commission, a commission such as this Commission, authorized by the Legislature to make an investigation. It was given an appropriation of \$150,000 to determine the feasibility of a canal to connect the Ohio River somewhere in Pennsylvania with Lake Erie somewhere in Ohio. That Commission located and surveyed a route 101 miles long, between the Ohio River at the mouth of the Beaver River, in Pennsylvania, and the other terminus was located on Lake Erie about seven miles west of Ashtabula. The distance is 101 miles. The Commission employed Smith Brothers, of Cleveland, who are considered the leading firm of marine architects on the Great Lakes. Smith Brothers made an estimate of the cost of carrying coal from the Pittsburgh coal district to Lake Erie. A 12-foot canal, with barges of somewhere about 1200, or even above 1500 tons, they determined would carry coal at less than five-tenths of a mill per ton per mile. With a 9-foot barge canal, the barges in this case being about 1000 tons or less—not much less—about 5 mills per ton per mile; and, with a 15-foot canal with barges that would be above 3,000 tons, three-tenths of a mill per ton per mile.

Mr. MacElree: That is what I had reference to when I asked Mr. Warriner whether such a rate would be feasible either upon the existing canals or upon canals of an enlarged nature.

Mr. Magee: There is a lurking danger in that proposition that I must explain. I am glad it was mentioned. This testimony is for the benefit of comparison with anthracite conditions. There is a back haul with Pittsburgh coal. There is, ore comes down from the mines. You have no such back haul in the anthracite conditions. So no one must presume that costs can be made as low on these canals over here as they can on canals in the western part of the State.

Mr. Turner: I do not want to be put in the position of questioning anything that Mr. Magee says, because I am quite sure he has gone into the matter more fully than I have—in fact, I know nothing at all about the transportation of the western part of the State—but I would like to get on the record here, for such use as the Commission may see fit, that the canal extending from Easton on the Delaware River to Bristol, was formerly operated by the State of Pennsylvania, built and operated by the State of Pennsylvania. I do not know whether Mr. Magee was aware of the fact.

Mr. Magee: Yes; I know something about the history of it.

Mr. Turner: It is my recollection, although I am not sure—Mr. Warriner can correct me if I am wrong—that that canal is practically leased from the State of Pennsylvania by a company of which the Lehigh Coal & Navigation Company holds a majority of the shares of stock.

Mr. Warriner: That is correct.

Mr. Turner: And there is a provision in that lease, I think, that the State can take that canal back, upon certain terms and conditions, which I do not recall.

As to the canal on the Lehigh, which extends from Mauch Chunk to Easton, I presume the Commission is aware, from Mr. Warriner's former testimony, of the very grave difficulties that are constantly encountered in the operation of that canal in that very contracted valley; that for long periods of time in the summer there is not sufficient water, and at other times, by reason of freshets, there is entirely too much, by reason of which fact—that is, by reason of the freshets—the banks or walls of the canals, whatever they may be called, are very frequently washed out, and the sediment of the river, which is very largely coal dust and other stuff of similar character, fills up the canal, requiring constant and continued dredging. I do not know whether any

of those difficulties confront the canals in the western part of the State.

Mr. Magee: All over the world.

Mr. Turner: I presume so, but whether to the same extent or not I do not know. I think Mr. Warriner suggested at the last hearing that, in order to provide sufficient water to operate the canal effectively during the summer months, it would be necessary to build in the Poconos, the watersheds of the Lehigh and other streams up there, immense reservoirs so as to preserve the flood waters. I think, probably, as an economic measure for the State as a whole, that would be a perfectly splendid thing to do, because it would conserve the waters that now run to the sea and are not utilized.

Now as to the operations of the canals by the Lehigh Coal & Navigation Company, the Commission should know, if it has not been testified to by Mr. Warriner before, that the Navigation Company simply has a canal which may be used by anybody, in precisely the same way as a turnpike. Anyone can come and put a canal boat upon that canal and transport anything he wants, provided he pays the comparatively small toll charges that are covered by schedules, and there is no effort at all upon the part of the Lehigh Coal & Navigation Company to keep people from using that canal in that way. On the contrary, they have experimented at large expense for years past in the endeavor to find some economical way of handling these canal boats, or enabling people who want to use canal boats to do so. But up to date we have not been particularly successful.

Mr. Magee: And the thing is not profitable?

Mr. Turner: It has not been profitable, no.

Mr. Magee: Why do they continue it?

Mr. Turner: There is the obligation under the State, under our charter, of course, to continue operating the canal, just as there has been in New Jersey, where the Lehigh Valley Railroad, I think, for years has been seeking legislation to abandon the use of the canal. I am not saying that we have any desire to do the same thing. As a matter of fact, the Navigation Company ships over the canal in excess of——

The Chairman: You say the canal is operated at a loss?

Mr. Turner: Yes, sir; the canals are operated at a loss, considering the money that has to be paid out.

The Chairman: Then why do you not abandon the use of it?

Mr. Turner: In the first place, we have not the right to abandon the use of it. You cannot abandon a canal without legislative authority, and we have been always hoping that the

increase in business would make the enterprise a success. The Lehigh Coal & Navigation Company ships over the canal between two and three hundred thousand tons of coal per annum. So far as I know, no other miner ships over the canal, although he has the same privilege of shipping over the canal as the Lehigh Coal & Navigation Company, and likewise with respect to all other commodities. It can be used if the people want to use it. There is no restriction whatever. It is an open, free highway, precisely the same way as any turnpike or any public road. All that is necessary is for the person who has a boat there to pay the tolls.

Mr. Magee: But, Mr. Turner, if there were another highway alongside of the river canal, as there is—lots of them, railroads—people are not going to use your highway when they can use another one to much better advantage.

Mr. Turner: I think that is quite right.

Mr. Magee: Now the question I am raising here is why—and I am asking you now—why it is that the Lehigh Coal & Navigation Company persist in operating a useless highway, an unprofitable highway?

Mr. Turner: We do not say that it is a useless highway, Mr. Magee. On the contrary, the canal serves certain definite purposes.

Mr. Magee: What?

Mr. Turner: There are along the canal, from my own knowledge, from Mauch Chunk to Easton, that being the part with which I am more familiar, a great many coal yards, a number of coal yards. Let Mr. Warriner answer that. He is much more familiar with it than I am.

Mr. Warriner: There have been a number of dealers. I might say, Mr. Magee, that this matter has had our very serious attention the last two or three or four years, as to what disposition we could properly make of what is, we believe, one of the foundations of our charter rights. We are not only using the canal for the purpose of transportation, but that canal also has a secondary use in the sale of water powers to very many people along the line, on account of which the structures have to be maintained. When we say we lose annually in the operation of the canal, we lose after we have taken all of the revenues arising from the transportation of our coal and such other business as is handled by outsiders on the canal, which is very small, and also all revenues arising from the sale of power to various mill owners, etc., along the line of the canal, who use the water out of the dams along the river. I do not think that you quite

appreciate, Mr. Magee, if I may say so, the problem confronting the anthracite business as differentiated from the bituminous business. I agree with all that you may say in regard to the relative economies of transporting any commodity in large bulk as against small bulk, and it is quite true that the railroads have been able to reduce their cost of operation by enlarging the bulk of the package, namely, the size of the car, and it is also quite true that the large canal boats or the large barges, or even going to the large boats on the Great Lakes, have largely reduced the cost per ton per mile handled of transporting any raw commodity. That is quite feasible where the conditions are such that it can be done; but, of course, with us in the mountainous region of Pennsylvania, and especially with the Lehigh Canal and the Lehigh River, the rise of the river is so rapid that fluctuations of the stream between high and low water are so pronounced—it is not a river in the sense that other streams are rivers; it is more nearly a mountain stream, so that we have to have, as I recall, in the distance of, I think it is, 48 miles, from Coalport to Easton, 22 locks, indicating a very rapid fall of the stream. Furthermore, the commodity carried differentiates very greatly from bituminous coal. Bituminous coal can be handled with infinitely greater economy than can anthracite coal be handled. Every time you change bulk, or change the form of your package, if I may use that phrase, with anthracite coal, the loss in the degradation of the material is far greater than the expense of handling the material.

Mr. Magee: It is very large in either of them.

Mr. Warriner: You take, for instance, the handling at the terminal. Our actual expense at Balston yard, in the City of Philadelphia, in unloading out of these canal boats and putting into cars, is somewhere in the neighborhood of 15 cents a ton. On the other hand, our degradation, actual loss in the value of the product due to its degradation from the prepared anthracite sizes to the steam sizes, amounts, in round figures, to about 25 cents a ton. So that our total loss in handling is about 40 cents a ton. Now that that is a real and actual loss is apparently realized, not only by the operators, but by the dealers themselves in the City of Philadelphia, because they can ship coal to-day over the Port Richmond piers of the Reading Company at \$1.40, for shipment within the capes—that is, to Philadelphia or the vicinity—as against \$1.70 delivered in the yards; or, for shipment beyond the capes, at \$1.30 a ton, 40 cents a ton less. My understanding is that the amount of business delivered by water in Philadelphia, instead of increasing, has been decreasing,

showing the undesirability of it on account of the change of the package and the loss from the degradation of the coal, which is a very serious item.

Mr. Magee: I would agree with you about everything except your reasoning. The great trouble about reasoning against water transportation is that you always pick out some one feature about water transportation in which it is admittedly inferior to rail, and then you blame the decline of water transportation upon that inferiority, that one factor of inferiority, as if you were going to close the question that way. There is more than one respect in which water transportation is inferior to rail, but there is a large number in which the water is superior to the rail, and what I am proposing to this Commission is that they suggest to whoever appointed them that there be an investigation of the varying, relative values of the various factors, both for and against water transportation.

You mentioned one thing that I am very glad you did mention, because I forgot it. The fact that you ship coal to Philadelphia at a less rate when it is destined for a longer haul by water, than you do if it is shipped to Philadelphia for consumption in Philadelphia, is an admission on your part, or on the part of the railroad carriers, that they charge much more for the coal hauled than the cost of the service, the expenses that they lay out in the carriage. It brings up the intense artificiality of railroad rates under competition, which should not be permitted in my judgment, but which, nevertheless, is permitted, because we have no minimum rate provision in the Interstate Commerce Act, nor in any Public Service Company Act. But a water haul of anthracite to Philadelphia would not permit of a differentiation as between a further haul of that coal. That differentiation between coal to be consumed in Philadelphia and coal to be hauled or carried beyond the capes is entirely artificial and ought to be wiped out, and that is one of the things that canal or canalized river transportation would wipe out, to the advantage of Philadelphia.

Mr. Warriner: Well, Mr. Magee, I hold no brief for the railroads.

Mr. Magee: No, but I assume you are sympathetic toward the railroads.

Mr. Warriner: Not at all, sir. I would be equally glad with you to believe that canal transportation would be feasible, for a selfish reason if for no other reason, in that we have a canal, and if, by the expenditure of capital efficaciously, that canal transportation would become feasible for the anthracite, I would be

only too glad to make use of a transportation canal which I have and use it to the fullest advantage. The revenues of the company which I represent would not be depreciated in any particular by the use of that canal, and, furthermore, if we could operate that canal at a profit, the revenue would be just that much enhanced.

Now the differentiation between, you might say, the \$1.30 rate to Port Richmond and the \$1.40 rate, is, of course, something I am not here to defend or decry in one way or another, except that you are well aware, as a member of the Public Service Commission, that the differentials out of joint rates are generally less—that it is accepted railroad practice that out of the joint rate a company performing a part of the service almost always receives less than they do for a local rate to the same distance. Whether or not that is justified I am not here to say, because I do not represent the railroads in any particular. I do represent an independent shipper of coal. Now as far as the \$1.30 or \$1.40 rate into Philadelphia is concerned, differentiated from the \$1.70 rate for local delivery, of course, you understand that one is a delivery into a yard. It is where the great bulk of the traffic goes. The other involves not only the delivery into a yard, but also involves the individual service to the individual switch of each and every coal dealer, which is a very different proposition. But so far as the subject of the improvement of the canals of this State is concerned, I want you to understand that in no respect am I antagonistic to the suggestion. In fact, I would welcome it in every way, and if the result of an engineering commission would determine that, so far as the anthracite industry or the transportation of anthracite is concerned, canals would serve as a useful highway for that commerce, I wish to say that the canal systems that we have, if we have not the capital to provide for such improvements as would be practicable, we are perfectly ready to sell them either to a private corporation or to the State, for the purpose of making such improvements as would appear to be justifiable to serve a need that would be beneficial to the people of this Commonwealth. Do I make myself absolutely plain?

Mr. Magee: Yes, except that I do not believe that you are not admitting or realizing that your property has no value as a transportation agency at the moment, when you speak of selling it. I cannot imagine you selling something that has no value. If it has value as a water power proposition, why then, of course, if your water powers were destroyed, you ought to be compensated for them.

Mr. Warriner: The Lehigh Coal & Navigation Company are the successors in a property which was built and purchased from the State, in so far as the Delaware canals are concerned.

Mr. Magee: Accompanied by a condition that it would serve the public.

Mr. Warriner: Oh, no. As I understand our charter, we provide a waterway, open to anybody who desires to use that waterway.

Mr. Magee: Yes, sir; you have undertaken to serve the public, that part of the public that wants to use your waterway, put boats on it. Now you have not done it. You do not do it.

Mr. Warriner: I beg to differ with you, Mr. Magee. The Lehigh Coal & Navigation Company's canal is maintained as a continued canal, of equal depth and equal facilities to the majority of the canals in this State under similar conditions. I do not know of any that is larger. The Chesapeake & Ohio Canal along the Potomac River is almost identical in size. The Schuylkill Canal is almost identical in size.

Mr. Magee: You can compare your situation with the Schuylkill, but not with the Chesapeake and Delaware, because that is an entirely different kind——

Mr. Warriner: I did not say the Chesapeake and Delaware. I said the Chesapeake & Ohio Canal, along the Potomac River.

Mr. Magee: You may compare it with the Chesapeake & Ohio also, and the only inference that anyone can draw from the outside—he may be wrong about it, but the only inference he can draw is that all three of those canals are operated, maintained, in the archaic condition in which they are, and operated in the manner that they are, in the interest of railroads. That is the only conclusion that anybody ever came to.

Mr. Warriner: That may be true in regard to the others——

Mr. Magee: The Baltimore & Ohio Railroad controls the trustees of the Chesapeake & Ohio Canal, who have been operating it for more than twenty-five years at a loss. The Reading Company owns the control of the stock of the Schuylkill Navigation Company and operates it at a loss. The Lehigh Coal & Navigation Company canal is operated at a loss.

Mr. Warriner: Yes.

Mr. Magee: What is the conclusion?

Mr. Warriner: I know, but what are the facts, so far as the Lehigh Coal & Navigation Company is concerned? That is hardly based upon the facts. I am absolutely frank with you in saying to you that, if the Lehigh Coal & Navigation Company

could ship its coal over that canal it would do so, and it would be to its interest to do so.

Mr. Magee: Still, it does not do it. We must judge your motives from the outside like anybody else's. Why should you operate a piece of property that does not pay you?

Mr. Warriner: Because we believe we have to under our charter.

Mr. Magee: Yes, but you have to do more than that under your charter. You have got to operate a canal that is up-to-date under your charter, according to my construction of the law at any rate.

Mr. Turner: Do you not think, Mr. Chairman, that we are getting into the discussion of legal questions?

The Chairman: It is rather entertaining.

Mr. Magee: I am very glad to do it, because I want the Commission to take this thing into account.

The Chairman: We will hear anything you have to say.

Mr. Turner: I do not know as we have anything to say on that. Mr. Magee states certain propositions and certain facts and then draws certain conclusions.

Mr. Warriner: The Lehigh Navigation Company canal was first built by the State, and afterwards sold to a company from which the Navigation Company leases it. The Schuylkill Canal was built by the Navigation Company and accepted by the Governor, a special commission appointed for that purpose.

Mr. MacElree: Let me ask this question, if I may interrupt you. Suppose this Commission were to find, as a fact, from the investigation which it has conducted, or from the testimony before it, that there is nothing to show improper or extravagant profits on the part of the operators by reason of their participation in the anthracite coal business, and to find further from the testimony that there is no indication of excessive profits to the retailers from their connection with the anthracite coal business, and to find, as we must find, that the tariff for freight rates is one over which we have no control and one that is fixed and determined, and not therefore subject to sudden change, and to find, as a conclusion to what I have suggested, that only two possibilities remain by which the cost of anthracite coal to the consumer could possibly be reduced, one of those being the elimination, if possible, of the middleman, and the elimination of the possibility of his speculating in coal, as has certainly been the case in this present stress, and to find as the only other possible solution looking toward a reduction, the reducing of transportation costs incident to the anthracite business, in your judgment

would an investigation be wisely recommended to the Governor and to the Legislature who created the present Commission sitting now in connection with this investigation—would a recommendation in your judgment be warranted looking toward the appointment of a properly constituted Commission, or looking to the conferring of that power upon the existing Public Service Commission, to go into an exhaustive study and investigation of the feasibility of transporting coal from the anthracite coal field to Philadelphia by canal routes?

Mr. Warriner: I would be very glad to see it, Mr. MacElree.

Mr. MacElree: And would you consider, as a man closely connected with and having very intimate knowledge of the coal situation, such a recommendation to be one that would have merit?

Mr. Warriner: I would think it would. I think it would have merit; yes.

Mr. MacElree: Would it be one that would commend itself to the coal operators, who, like yourselves, are not concerned or interested with the railroad transportation end of it?

Mr. Warriner: Yes, I think it would, because I know of my own knowledge that many operators would like to see lower transportation rates, if such rates could be obtained. In fact, they are all seeking them and there has been a great deal of litigation on that subject.

Mr. MacElree: Would such an effort have the full co-operation and assistance of the Lehigh Coal & Navigation Company, in so far as respects the navigation end?

Mr. Warriner: Certainly. We would be very glad to give you all the assistance and co-operation in our power to make the fullest examination of all the conditions.

Mr. MacElree: I have here, and will make a part of the record, simply for the purpose of further questions, if it is deemed worth while, the suggestion of Mr. Charles Heebner, of counsel for the Schuylkill Navigation Company, replying to my invitation to attend this hearing and offer any testimony or suggestions that would be of moment to this investigation, that "it must not be overlooked, however, that the Schuylkill Navigation Company is under no obligation to build or maintain boats, or to transport coal or any other commodity for the people, and it must not be forgotten that it keeps its canal open for transportation by those who wish to use it, and does this at considerable expense, and at tolls for the use of the canal which are so low as to be utterly inadequate to make any return upon the actual capital invested in the construction of its canals."

Are the conditions suggested by Mr. Heebner similar to those with respect to the Navigation Company's charter, that it is not under any obligation to maintain boat service?

Mr. Warriner: Yes. The canal offers a highway for anybody who wishes to run their boats on it.

Mr. MacElree: That, and that alone, is the obligation of the Lehigh Coal & Navigation Company with respect to it?

Mr. Warriner: Yes. Several years ago we endeavored to get a return business by quoting rates for various business along through the Schuylkill Valley from Philadelphia, but we never were successful in getting it.

Mr. MacElree: On whose boats is the tonnage now carried over the canal hauled?

Mr. Warriner: On boats belonging to the Navigation Company?

Mr. MacElree: And the investment is and expenses of those boats, of course, are figured as a part of the expense incident to that hauling, are they?

Mr. Warriner: Not the investment. The expense of maintaining the boats, is, yes. The expense of maintaining the boats and maintaining the canal property itself is a part of the haul. In round figures it costs as much—it costs a little more, my recollection is—to maintain the canal itself than it does to operate it. The maintenance charges are higher, slightly, than the operation charges of the canal.

Mr. MacElree: Does the Lehigh Coal & Navigation Company set aside, for the maintenance of its barges and the interest on the capital invested in that, sufficient sums realized from the sale of that anthracite coal, and from the amount set aside for transportation costs, as to maintain that service?

Mr. Warriner: No, it depreciates enough to maintain the boats, that is all.

Mr. MacElree: Depreciates enough?

Mr. Warriner: Yes. Outside of that there is no depreciation in connection with the canal.

Mr. Turner: Mr. Magee, when you speak of the \$1.70 rate to Philadelphia, you are not unmindful of the fact that your Public Service Commission have, by order, reduced those rates to \$1.40?

Mr. Magee: \$1.30, I believe; 40 cents reduction.

Mr. Turner: Therefore doing away with the differentiation that you speak of in your testimony?

Mr. Magee: Yes. I, of course, do not know what the fate of that decision of the Public Service Commission will be, and.

even though it should be allowed to stand in full, it strikes me that there is such a large margin between what the actual cost of carrying that coal is and what the rate is, that the City of Philadelphia should never be satisfied with that reduction.

Mr. Turner: That may be, but as a matter of fact, after a very thorough investigation, the Commission found that a rate of \$1.30 to Philadelphia was fair and reasonable?

Mr. Magee: No; was not unfair and not unreasonable.

Mr. Turner: Was not unfair and not unreasonable, and reduced the rate from \$1.70 to \$1.30.

Mr. Magee: Yes. Now there is all the difference, Mr. Turner, in the world between what is right and what is wrong. There is a big margin between what the people of Philadelphia ought to get their coal for and what any regulating body will say they must have it for. The Interstate Commerce Commission in all of its cases, or in many of the cases, affecting coal rates out in the western part of the State, determined what the actual cost of the carriage is, the expenses of the service, and in those cases it has found—at least in one case, that of *Boileau vs. Pittsburgh & Lake Erie Railroad*—that the actual cost of carrying a ton of coal for a distance of 147.8 miles, from a theoretical point in the Pittsburgh coal district to Ashtabula, on Lake Erie, was 24 cents. The rate at that time was 88 cents. The Interstate Commerce Commission ordered a reduction of 10 cents. It went on to say that there was an enormous profit there which it did not feel justified in interfering with, and went on and gave the usual reasons that I have touched upon in my paper that I just read here.

Now Governor Pennypacker, in the *Beilis* case, found that the actual cost of hauling coal from Schuylkill county points to Philadelphia was about 45 cents; that is, the operating expense. That is not allowing anything for profit upon the capital invested. He had no means of knowing what part of the capital was invested in this operation, and, therefore, he did not speculate about what the total actual cost of the carriage of that coal was to the railroads. But he did find through the accountants that the operating expenditures were 45 cents a ton. That is as far as he could go in that respect. But he went on in another direction and he found this, that the actual revenue per ton mile of the Reading Railroad—they offered this themselves, by the way, he did not need to dig for it—the actual revenue per ton mile of the Reading Railroad from anthracite coal in 1907 was above 9 mills per ton per mile. In 1912, which apparently was the year before the testimony was taken in the *Beilis* case, it was about

8½ mills per ton mile, as against a rate from the Clearfield region on the Pennsylvania Railroad for soft coal to Philadelphia, of, I believe now, less than 5 mills; and if he had wanted to go any further, he could have taken the C. & O. rates in Virginia, both to the Lakes and to the Atlantic, to tidewater, and he would have found rates lower than 3 mills per ton mile. Now it might be said that the greater congestion of business in population and traffic in northeastern Pennsylvania would require some higher charges than the C. & O.; but, surely, there cannot be any difference such as between 3 mills a ton mile and 9 mills a ton mile. Then, on top of all that and strongest of all, is the fact that the average revenue per ton mile from all kinds of traffic in the United States, over all the roads in the United States, is only 7 mills. That includes railroads that are operating out on the prairies, with probably a dozen half empty freight cars—every imaginable kind of freight, livestock and silks and diamonds and coal and ore, and every imaginable thing. Now with these other things that are carried at an average rate of 7 mills per ton per mile, with only a few cars on a locomotive, compare the traffic of anthracite coal, probably 50, 60 or 75 cars to a trainload, and 40 or 50 tons to a car—I do not know how many; I am speaking of bituminous conditions—a solid investment running all the way through from the colliery to destination, and not like classified freight, where a train is compelled to stop at every station to leave a car off or to drop a part of a carload off—no such operating conditions as that, the most ideal operating conditions, the largest possible kind of unit, a through haul, for a good distance, over a hundred miles; and that costs more—I mean the revenue derived from that, the cost that is inflicted upon the consumer, is more than the average cost of all the freight carried in the United States under every variety of condition. Here is the ideal condition costs more than the average.

Mr. MacElree: Is not that a matter that might merit even further relief before the Public Service Commission?

Mr. Magee: I was not on the Public Service Commission at the time and I am not acquainted with the record.

Mr. Turner: I want to say, before leaving, that we are perfectly willing to help this Commission, or any other Commission, to develop the canalization of the rivers, or the canals, in any way possible to make them profitable.

(Mr. Warriner and Mr. Turner not present during remainder of session.)

By Mr. MacElree: Q. Would you not consider it, Mr. Magee, as beyond the contemplated authority of this Commission either

to make any investigation or recommend any action concerning the existing freight rates on anthracite coal? Is not that a matter with which this Commission has simply to deal as it finds it to exist? A. I have forgotten the terms of the resolution under which you are working, but I think it is very broad. Q. The resolution, in a general way, provides for an investigation by this Commission to determine, first, whether there shall have been, or is, any unlawful combination existing between either the operators or retailers in the anthracite coal business, and, second, to determine and report as to whether or not such increases have been occasioned in the cost of anthracite coal have been justified or not.

The Chairman: The language is, I think, to inquire into the cause or causes of the rise in the price of anthracite coal. A. Of course, there has been a constant rise for fifteen years, and before that, but it began to be noticed, the rise in the anthracite coal, when that first big strike occurred up there, I believe.

Mr. MacElree: That was about 1902.

Mr. Magee: Yes. That is when Hearst came in, you know, before the Interstate Commerce Commission, trying to make out that the anthracite railroads had formed a combination in violation of the Anti-Trust Act. As for your question about the advisability of another investigation by the Public Service Commission, Mr. MacElree, I do not think that would be a good one unless the present one were discontinued; unless the Commission recalled what it had done and went into a further investigation. It is pending now, you know, in the Supreme Court.

By Mr. MacElree: Q. I take it that, pending that being determined, and having, as we do, the fullest confidence in the integrity of not only the preceding Public Service Commission but of this one, that we might well leave alone, at least so far as we are concerned, the question of freight rates, because if they contribute, in the transportation by rail, an unjust proportion of the total cost of anthracite coal to the consumer, that situation must necessarily be relieved by the Public Service Commission. In other words, no recommendation of ours or no investigation by us, could in any way tend to relieve that situation, unless we can, by the use of the suggestions that you have made to the Commission with respect to other means of transportation, make some recommendation. I do not know whether you would agree with me as to that or not. A. I think it is recognized in our profession, you know, that when a matter is in litigation you had better let that alone, that that is good tactics all around.

Mr. MacElree: That is the way we felt as to the freight end of it.

Charles Heebner, in his letter of November 25, 1916, encloses me the testimony of Mr. E. F. Smith, given under careful examination and cross-examination in 1914 in the case of United States vs. Reading Company et al., the so-called coal trust case. Mr. Heebner refers to Mr. Smith as "the man above all others in Pennsylvania, I might say in the United States, competent to speak on this subject," which subject is canal transportation. I will just read you a bit of this, if you have time:

"Q. Referring to Section 16 giving the Company"—this refers to the Schuylkill Navigation Company—"the right to take tolls from each ton's burden of every boat at the rate of 12½ cents at each lock below Reading, how many locks were there below Reading in the Canal? A. There were twenty-four locks below Reading. Q. Referring again to the same section, where it is provided that they are to be able to take 8 cents toll for each ton's burden of every boat at each lock above Reading, how many locks were there above Reading? A. Forty-eight locks above Reading. There are seventy-two locks in all from the head of Navigation to Fairmount, Philadelphia. Q. What did that make the authorized toll per ton burden of the vessel? A. That depends entirely upon whether they mean by the burden of the vessel its calculated tonnage or its actual loading tonnage. On the calculated tonnage it would make about \$6.84. Its actual tonnage, the cubic contents of the vessel in displacement, the same as ocean steamer, like the *Imperator*, is measured, and that is the actual tonnage that the vessel carries. Q. In either event, taking the lowest figure, it makes your toll about \$4 a ton, does it not? A. In what year was that Act? Q. I am referring to when the Act was passed, in 1815. A. Those were much smaller boats than are used now for navigating the Schuylkill, and my recollection in reading about them is that they were about sixty tons capacity at that time. Q. At what rate per ton of coal would that put the freight? at 12½ cents for the twenty-four locks below Reading and at 8 cents for each lock above Reading, forty-eight in number, for the ton burden of each boat? A. If this is taken at 8 cents a ton for each lock above Reading, and 12½ cents a ton for each lock below Reading, it would make an aggregate of \$6.84 a ton. Q. Was the canal simply a water highway maintained and operated by the Navigation Compny? A. As a water highway alone? Q. Yes. A. No; it was not. It was chartered as a public highway of the State. As a canal and river navigation, called the Schuylkill Naviga-

tion for the passage of boats, and to be used by the public on the payment of toll. And it was also distinctly chartered to sell water power. Q. So far as its canal use was concerned, it was and is possible, is it not, for anybody who wants to operate a canal boat of his own, to go on the canal, under his right to demand the use of it upon the payment of the tolls? A. Yes, sir. It has always been so, and is so now. Anyone approaching a lock with a boat, on payment of toll, can pass through without question, with any cargo that he may choose to load in his boat. Q. At the present time all that any independent coal dealer would have to do would be to load his coal on a canal boat and bring it down through the canal if he thought well to do so? A. That is all. He can do so. Q. Is this paper which I show you the toll tariff of the Schuylkill Navigation Company? (Paper shown witness.) A. It is. This paper contains the rates of tolls to be paid on anthracite coal for the three various sizes, prepared sizes, pea coal and smaller sizes. These rates on coal include steam towing by tugs between the outlet lock at Fairmount in tidewater and any service on the Schuylkill front down to the mouth of the Schuylkill, but not into the Delaware River. Q. It also includes the service of dumping the coal into the canal boat at the point of origin, does it not? A. It does. It includes the payment of the railroad tolls from the mines to the canal landings at Port Clinton, where the coal is put into the boat. Q. That is, if that independent shipper owning his canal boat wanted to use this canal for the transportation of coal to Philadelphia, he would pay the Schuylkill Navigation Company \$1.05, and the Schuylkill Navigation Company would pay the cost of transporting that coal from any colliery in the Shamokin, Mahanoy, Schuylkill, Lorberry and Lykens Valley districts down to Port Clinton, and there dump the coal into that man's canal boat for him all for \$1.05? A. No; he would not pay the charge of dumping the coal into the canal boat. He would deliver the coal on the siding at Port Clinton. The Navigation Company would assume the expense of moving it from the railroad siding to the canal landings, weigh it on its own scale, and dump it into the boat. Q. That was what my question stated; that the Navigation Company pays the railroad for getting the coal into the canal boat? A. No; the Navigation Company does not pay the railroad the entire cost of bringing it from the mines and putting it into the boat. It pays the cost of bringing it from the mines to the railroad sidings nearby Port Clinton landings. Q. This says that the above rates include the loading and trimming. What does that phrase mean? If it does not mean that they

also assume the cost of loading the coal into the canal boat, what does it mean? A. The Navigation Company assumes the cost of loading and trimming. Q. That is what I say. A. I did not understand you. The Navigation Company assumes the cost of loading and trimming. Q. The Navigation Company then assumes the cost of transporting the coal from the mines to Port Clinton and then moving it over and weighing it and dumping it into the canal boat? A. Yes, sir. Q. The Navigation Company does that? A. Yes, sir. Q. So that the shipper has only to pay \$1.05 for getting that coal from any of the mines in the regions I have named to Philadelphia in his own boat; is that right? A. That is right."

By Mr. MacElree: Q. That indicates evidently that their existing rates on prepared sizes, for all services rendered from the mines to Fairmount, Philadelphia, is \$1.05 per ton, and that, of course, predicated upon their using their own barges and operating those barges. A. Mr. Warriner says that they had about 300,000 tons, did he not? Q. Yes. A. He does not say in that testimony. Q. That is not Mr. Warriner's company. A. No, I know. At any rate, Mr. MacElree, the quantity does not make so much difference; but would it not be advisable for the Commission to trace up those 300,000 tons of Mr. Warriner's, and whatever the Schuylkill Navigation Company has, and see whether that coal sells at the same prices in Philadelphia as the coal that is shipped over the railroads, and if so, why it happens to be so? You would think that coal that would come in there for 65 cents a ton less than the big bulk of the coal ought to enjoy some advantages in Philadelphia that the other coal does not enjoy, because it seems to me that the owners of that ought to be willing to make a concession in price. Q. Yes, but I think the testimony of Mr. Warriner and others does not cover that fully, because their testimony was to the effect that all of their coal was sold at the current market prices, as established by the price the preceding month at tidewater. A. By the railroad selling agencies. Q. By their selling agencies. In the case of the Lehigh Navigation Company, they themselves are their selling agents. They sell their own. A. Then it would seem to me—I am arguing now besides testifying, as Mr. Turner warned me—but it seems to me that there is a 65 cents a ton profit for the coal that is shipped over these canals. Q. I think it might be well to find out whether that 65 cents per ton profit is added to the gross receipts during that term, during any current year. A. It does not make any difference what happens to the 65 cents. I have not that in mind, but I am trying to show that they are

offering testimony to prove my point. If they can carry coal now for 65 cents a ton less than the railroads carried——

By the Chairman: Q. That proves your case? A. Surely. Only I would ask you, then, to imagine a little bit further, that, if they were compelled to keep a canal that would be modern in its dimensions, so that they could carry the larger packages and reduce the cost still further, that they ought to be compelled to do that, too. But I think it is a great thing to have on the record that they actually do now, under these very inadequate conditions that exist, carry it for two-thirds as much, I guess less than two-thirds.

Mr. MacElree: I intend making this part of the record anyhow, because the entire tariff is set out here, and the pea coal is 75 cents a ton, smaller sizes 60 cents a ton.

Commissioner Langdon: That covers only one one point, does it not; the water terminal? That does not take in the loading into railroad cars and delivering to the yards, does it, the \$1.05?

Mr. MacElree: No, I take it it does not. The testimony is: "Q. So that the shipper has only to pay \$1.05 for getting that coal from any of the mines in the regions I have named to Philadelphia in his own boat; is that right? A. That is right."

Mr. Magee: He pays tolls of that much, then. He has to add to that, then, whatever the cost of carriage is?

Mr. MacElree: Yes, he has to add the cost of transporting.

Mr. Magee: Then the \$1.05 is not the actual cost of getting the coal to Philadelphia. That is the toll. You see, the favorite way of overthrowing the advantages of water transportation is to hold up to the public such canals as the Lehigh Coal & Navigation, the Schuylkill Navigation and the Chesapeake & Ohio. They even themselves hold each other up as a good horrible example of inland water transportation. Mr. Warriner says the C. & O. has a reason why water transportation is a failure, but the remarkable thing is that they all remain in it. They are playing dog in the manger. I have got to judge their motives like I would anybody else's. If a man is maintaining a piece of property at a loss to himself, he is gaining some advantages somewhere else. Now then, one of these canals, the C. & O., as I told you, is controlled by the Baltimore & Ohio through the receivers, the Baltimore & Ohio being the owner of the bonds, the foreclosure of which caused the receivership. The Reading Company owns the Schuylkill Navigation Company. I will not undertake to say what the relation is in the other. Maybe there is none at all. Maybe these gentlemen are merely holding

on to that bank of the river there as a valuable capital asset. That itself is probably growing in value every year. That may be their motive in doing it. But whatever it is, my point, and the reason why I came here, is, that the property is affected by a public interest. The Supreme Court of the United States has decided this thing in 1876, that a charter to a public utility corporation does not irretrievably pass out all of the rights that the Commonwealth has; that the Commonwealth keeps a string on it as it were, and all the Public Service Company laws and the Interstate Commerce Commission Act, have all been passed as the result of the decision of *Munn vs. Illinois*, in which the Supreme Court stated clearly just what reservations there were remaining in the State. The corporation owns its property, the corporation operates its property, but the corporation must own and operate that property with a definite view as to serving the public, according to the standards of the day. In other words, they have got to improve and bring their property up to date all the time. If the railroads of 1830 and 1840 and 1850 had continued in the same identical condition until 1916 that they were in at that time, they would not be making any money either. They would be like the Lehigh Coal & Navigation Company; some philanthropist would have to operate them, or else they would have to be operated with some other end in view than that end that the State created them for. The State created them for transportation and did not create them to speculate in water powers or any other thing.

The Chairman: Speaking for myself, from the beginning of this investigation, taking up the retailers and the middlemen and the operators and the profit of the retailers and of the selling agents and the profit of the operators, and then the sum charged by the railroads, the railroad rate to my mind is out of all proportion to the other elements that make up the final charge to the consumer. Of course, that is without going into the books of these corporations, but it seems to me that the sum set aside as transportation charges is out of all proportion.

Mr. Magee: If you read the Governor's opinion in the Beilis case, you will see what I think is the most startling thing in the whole case, and that is that they receive more per ton under these ideal conditions for coal than the average of all the railroads do in the United States for all kinds of traffic.

By Mr. MacElree: Q. You are familiar, I suppose, with this Pennsylvania State Railroad Commission report as to the abandonment of the canals of the State and as to the abandonment of this construction of competitive railroads, and so on? A. Yes.

Q. On page 13 of that report the following appears: "The possibilities of canal transportation in competition with modern railroad facilities have never been tested in this State, and the Delaware River extending along our entire eastern border and with its tributaries draining a large and important section of our State; the Schuylkill River and the Susquehanna River with their tributaries reaching practically all the remaining industrial centers east of the Allegheny Mountains, including the anthracite coal fields, and all three of these important waterways reaching tidewater, seem to invite the development of slackwater navigation. An interesting experiment was made during the season of navigation of 1908 by the Lehigh Coal & Navigation Company in an attempt to develop merchandise traffic on their Delaware Division Canal, between Easton and Philadelphia. A few new packet boats, designed especially for this trade, were built and were in use during the entire season. A regular schedule was maintained between those two points and shipments were dispatched and received with evident satisfaction to both shipper and consignee, deliveries being effected between the terminal above mentioned quite as promptly as by rail and at reasonable rates. The tonnage developed was not large, but the variety of products handled demonstrated the possibilities of the business and the popularity of that method of transportation. The operating company reports that the outlook for the approaching season is encouraging, and that an additional amount of business is promised. The open toll rates in use on this canal are those fixed by the Canal Commissioners of the State of Pennsylvania for the year 1856, the rates for transportation in the Company's boats, of course, including these tolls." Would not the more feasible method be, if it is possible, the requiring of these canal companies to operate barges equipped for the handling of various sorts of freight? They can do so, although apparently from their charters they are not obliged to do so. A. Oh, I think they are obliged to do so. It is an implication in the charter, even though there was no mention of it whatever. Business standards are changing in every age, every decade, I suppose, even, and you have got to take whatever the standards are of the moment and apply those to the enterprise that has been endowed by the State with power to do those things, and make them do them according to whatever appears to be the best manner at the time. You would have to go farther than to require them to run boats themselves. You must compel them to put in terminals and terminal machinery, not only for their own boats, but for the boats of customers. If they cannot have the modern

terminal conveniences, such as you have in Germany and Holland and France, they could not operate them, even though the other conditions were ideal. The principal trouble with these canals is, however, as I see it, that they are too small. You cannot get a big package. Q. They do not want the big package, apparently. A. The Monongahela River has a depth of nine feet and there will be barges on there of a thousand tons pretty soon. Jones & Laughlin's largest barge is now, I think, about 700 tons, and actually carries 600, and they will be up to a thousand, and when they do that the operating costs will be considerably under what I have said. I think they are about 9 mills. The 1000-ton barge will be under that. These canals, if they are to be of any use to the State, ought to be considerably enlarged, but you cannot stop at that. If you want to extend the advantages of these canals to other things beside coal—and they ought to be—you must put in public wharves and landings, public terminals, and there have the most modernly devised terminal machinery, and then, lastly and probably still more important of all, you ought to amend the Public Service Company Law of Pennsylvania and require railroads to enter into and make through routes and agree upon joint rates with water transportation companies, as well as other railroad companies. The Reading Railroad now can compel the Pennsylvania, if the Pennsylvania is reluctant to do it, to fix a joint rate between two points, one on each line. But the Lehigh Coal & Navigation Company could not compel its own railroad, the Lehigh & New England Railroad, to put in a joint rate, if the operating officers of the other road did not want it, just because the law would not stand behind them and make them do it. Q. If our recommendations should embody anything in the line of what has developed to-day, or in the nature of a suggestion of further investigation, in the light of your experience with the Pittsburgh & Lake Erie Canal, and with your experience in canalization schemes in general and their feasibility, would it be your judgment that a Commission similar in a general way to the existing Commission having in charge the Pittsburgh & Lake Erie Canal, should be suggested, or would it be your idea that such an investigation might more properly come within the scope of the Public Service Commission itself? A. The Public Service Commission has not the facilities to do those things. I think it ought to be an engineering investigation by a separate body. If this Commission, or somebody, would be inspired to make a complaint before the Public Service Commission about those two particular canals, and then the Public Service Commission would be given an appropriation to do it, that might result in too

narrow an investigation. Their investigation would necessarily be confined to an examination of the existing facilities and what would be necessary to enlarge them, whereas I have suggested in the paper that I read to the Commission that it be broader than that, that the rivers themselves be investigated, with a view to canalizing them, just the same as the Monongahela River is canalized. Every pool then is a storage reservoir for the pool below, and, while the first cost is larger, I do not think the cost of operating is as great. Q. Have you any judgment that you would care to express, in order that we might have the benefit of it, as to what expense, in round figures, such an investigation as the one suggested, would entail? A. I think that the problem is a very simple one. It is not a complicated one like ours out in the western part of the State. We are complicated by several different routes, several alternative routes. This would not be. Part of the way we are in a river bed and half the way we are outside of a river bed altogether, and you have nothing at all like that. Your course is clear, what you have to do. The reason I hesitate to suggest an amount is that you have two valleys, and I am wondering whether you ought to recommend that both be investigated, or only one, and then I suggested here that there be an alternative investigation, that the river itself be investigated and that the enlargement of the canal be investigated. So I am proposing four problems to you here. I do not think any one of them would cost nearly as much as our cost out there, which was \$150,000. I do not think any one of these would cost that, but the four of them would, and would cost more. Q. I assume that any recommendation of this character, in a general way, that this Commission might possibly make, would naturally result in an inquiry on the part of the Legislature as to the probable amount of money required or necessary for such an investigation, and I take it that we would hardly have time in which to develop that probable expense between now and the time we are obliged to make this report, unless we could gather it in a somewhat general way from persons like yourself, who have had that experience. A. I think if you wanted to investigate all of those things you ought to count on \$250,000. Q. That is, to investigate the four? A. Yes.

By the Chairman: Q. In the two valleys? A. Yes. I do not mean \$62,500 for each one now, because the cost of both surveys will be a good deal less for two than it would be for either of the two.

By Mr. MacElree: Q. In your judgment, would a recommendation to the Legislature and the Governor, involving the possible expenditure of \$250,000, by a competent Commission,

to investigate the four problems suggested by you, be warranted by the conditions that exist with respect to the anthracite coal transportation? A. I certainly think so. Q. And might they reasonably be expected to result in very considerable savings to not only the City of Philadelphia and the Port of Philadelphia, but to the entire eastern end of the State? A. I think not only great savings, but I think there would be another effect of the thing in the nature of a stimulated coal consumption, that would result in vastly enhancing the Port of Philadelphia from the commercial side. I think if you took something like a dollar a ton off the price of coal in Philadelphia, which would not come off the price of coal in New York or other places, that the result would be you would shift the various points where coal is shipped out of the United States all to Philadelphia. That is the way that would work, to my mind. All the coal shipped out of the United States, say in any coastal vessel, any vessel leaving a port of the United States, ought to go out from Philadelphia. Then, furthermore, I believe the coal consumption in and about Philadelphia would be increased. You would not have enough capacity, in my judgment, on one of these canals, and probably on two of them, to ship all the coal that would be shipped to Philadelphia if you took a dollar a ton off the cost to the consumer. Q. In other words, it probably in the long run would not interfere with the tonnage of the railroads at all? A. It would not interfere with the tonnage, but it would interfere with that 9 mills per ton mile. Q. It would require the reduction—— A. To bring it down to whatever the water cost was, if they could reach it, and if they could not bring it down to what the water cost was, then the coal that was transported over the water route would have to sell at a price that would enable the railroads to get a fair profit on theirs. That is economically the natural result.

Mr. MacElree: Yes, it could not be any other, of course.

By Commissioner Langdon: Q. Philadelphia, then, would be the dumping ground instead of New York. A. I would think so.

Mr. MacElree: I do not see, aside from those two possibilities, any other possibility of release in the anthracite situation.

By the Chairman: Q. I suppose you have looked at this resolution under which this Commission was appointed? A. Yes, I think it is pretty broad. Q. Do you not assume that the Commission was appointed primarily for the purpose of requiring the paying back of the tax? A. I was told that, but I read the Act trying to see that in it and I could not see that in

it, to tell you the truth. I was told that by somebody.

The Chairman: I think that is what the people had in mind who prepared it and had it passed. Of course, it may be that it is broad enough to cover all these other features.

Mr. Magee: Did the testimony show anything to confirm Professor Jones' statement that 91 per cent of all coal production was in the hands of the railroads and their subsidiaries?

Mr. MacElree: That would depend somewhat as to whether or not you classified the Lehigh Coal & Navigation Company, for instance, as a railroad or one of their subsidiaries. The Lehigh Coal & Navigation Company disclaim any association—

Mr. Magee: They all disclaim any association with each other. You can get the Reading and Lackawanna to say there is no association, and Jones himself does not say there is, and I do not say there is. We have got to take the result for it and say it looks as if there is.

Mr. MacElree: It looks as if it was 88 per cent.

Mr. Magee: I would count the Lehigh & New England.

Mr. MacElree: But it is apparent that, since the appointment of this Commission and since its active work began, with its organization finally effected early in May, after the loss of a good deal of time, that, starting at or about that time, these coal operators did pay back and have since then paid back, and only since, to the retailers probably 90 to 95 per cent of all this money collected under this Roney Act.

Mr. Magee: That is the 10 cents?

Mr. MacElree: Yes, practically; 10 cents a ton on prepared and 5 cents on smaller, and that will amount to several millions of dollars. I am not prepared to give the exact figures, of course. I have not totaled them up from this bunch of reports and testimony.

Of course, with a \$5000 appropriation, we could not consider getting in, under this resolution, to any such investigation as you suggest.

ADJOURNED.

The following testimony in line with the same ideas was offered the Commission by Wilfred H. Schoff, secretary of the Atlantic Deeper Waterways Association:

**PROCEEDINGS OF COMMISSION TO INVESTIGATE
THE INCREASE IN THE COST OF ANTHRACITE COAL
IN THE COMMONWEALTH OF PENNSYLVANIA.**

The Commission met in the Mayor's Reception Room, City Hall, Philadelphia, Pa., on Friday, December 8, 1916, at 2 o'clock p. m.

Present:

Hon. Robert S. Gawthrop, Chairman of the Commission, and Commissioner Edwin J. Lafferty.

J. Paul MacElree, Esq., counsel for the Commission.

Mr. Wilfred H. Schoff, secretary of the Atlantic Deeper Waterways Association.

WILFRED H. SCHOFF, having been duly affirmed, was examined and testified as follows:

Mr. MacElree: The Commission is in receipt of a communication from Mr. Moore, president of the Atlantic Deeper Waterways Association, suggesting that "in view of the testimony adduced before your Commission in the matter of coal and water transportation, it has occurred to this Commission that it might be of interest to invite to appear before your board Mr. Wilfred H. Schoff, secretary of the Atlantic Deeper Waterways Association, who will be able to throw some light upon this subject." Skipping a portion of this letter, it continues: "Mr. Schoff has a rather intimate knowledge of the canal situation in Pennsylvania and elsewhere. If he is called upon, I think he will be able to show that some of the canals under discussion before your Commission are capable of giving to the people creditable service in the matter of coal and other merchandise upon which the cost of living has increased." This Commission had before it some few days ago, Mr. Magee, of the Public Service Commission, who suggested the advisability of a recommendation to the Legislature, in the report to be made by this Commission, of the appointment of a further Commission, or the referring to the Public Service Commission, of the advisability or feasibility of utilizing either existing canal routes, or of canalizing water routes from the anthracite coal district to Philadelphia, in order to reduce the transportation costs of coal. Just so that you may have in mind what the Commission has in mind, generally, we have taken up the four features of the anthracite coal business; first, with respect to the operation of mining, then with respect to the operation of selling, then with respect to the operation of transportation, and, finally, with respect to the operation of the

retailer, and, if it is possible in any way to suggest or recommend measures by which any one of those four can be eliminated, or the expenses of any one of the four appreciably reduced, we feel that we will have accomplished something, and we would be glad to have any facts or figures or suggestions that you may have in mind, from your knowledge of the canal situation, or any ideas in connection with deeper waterways in general, that would affect this situation with respect to anthracite coal.

Commissioner Lafferty: Before Mr. Schoff proceeds, I understood you to say the other day over the telephone, Mr. Schoff, that you had some knowledge of the charters that the various canal companies now have and what rights they have under the charters.

Mr. Schoff: Of course, they are very broad rights, and they are based on Acts of the Pennsylvania Assembly many years ago.

Commissioner Lafferty: Mr. Magee touched on that as well, so that it might be well during your testimony to bring out such information as you have on that subject.

Mr. Schoff: I appear to-day before you gentlemen of the Commission as representing the Atlantic Deeper Waterways Association, which is a body composed of representatives of trade organizations along the Atlantic seaboard, the leading commercial bodies being members of the Association. and the object of the Association being to further the improvement of connected waterway facilities for handling traffic under modern conditions. The activities of the Association are naturally most constant with the United States Congress and with the Board of Army Engineers, that have jurisdiction over the improvement of the public waterways, which, of course, under the law—I speak as a layman, not being a lawyer, but I think it is admitted that there is no doubt of it—are the property of the people, and not to be used privately, or unless by consent of the people in due process of law, and from which the people cannot be shut off.

Our attention was brought to the hearings of your Commission and to the fact that the relation of these old canals leading out of the anthracite coal field to the present retail price of coal had been brought into discussion, and that itself involved the larger question of the original formation of the companies that constructed those waterways, and of the possible future relation of the State to those old charter rights, in any development that it might later on make for the benefit of the whole people of the State and of the United States, and it seemed to us that it might be appropriate to incorporate in your proceedings some ideas, not only with reference to the anthracite canals in them-

selves, but to their connection with the larger plans for a waterway system in this country under modern conditions, which are now partly put under construction and partly in a favorable condition of engineers' survey and report for early action by the Federal Government, because these waterways, if properly utilized, would be directly connected with such an interstate system under Federal control, and the State of Pennsylvania would have a very intimate interest in so improving their facilities as to keep itself in the van of progress for traffic of that kind as set, for instance, by New York State and the United States Government.

The present condition of the canals, I suppose you gentlemen of the Commission are perfectly familiar with. It is quite evident that they are not being used to the capacity that they were formerly used; that the traffic on them has dwindled from year to year, until it reached practically a minimum, below which the question might have arisen whether the companies that operated them were maintaining them as open waterways under the requirements of the charter, and it has remained in that way stationary for years, the bulk of the commerce of the anthracite coal field going to tidewater, to New York tidewater or to Philadelphia tidewater, by the different rail routes.

Its earlier connection—and with your permission I will take up the outside connections of these canals first, and then come back to them themselves—the earlier tidewater connections of those Schuylkill and Lehigh canals were not through waterways controlled by themselves, but controlled, one outlet by the State of Pennsylvania, and another outlet, or two outlets, across the State of New Jersey, canals constructed by private capital and later absorbed by railroad companies. The conditions of the combination of those canals and their association with the railroad companies was such that the anthracite canals themselves never had a thorough tidewater outlet by water, until such time as the whole facilities had been combined under railroad control, and the incentive for the development of the canals to their limit of possible usefulness had given place to other aims and objects of corporate management. And yet, without wishing to assert any value of those small channels beyond practical considerations, the fact is this, that while, in Pennsylvania, they carry only a minimum—the Lehigh Canal, I think, brings down to the Delaware River approximately 200,000 tons of coal a year, and the Schuylkill Canal, I suppose, hardly, if half that,—you find in comparison, under normal conditions, similar conditions, in European countries, that in more than one case waterways very similar, but under different control, are being actively

used and are carrying a large traffic, so distributed on the waterways as to produce a minimum cost at destination, availing of the cheaper cost of handling by water that advantages is feasible. I would like to submit, for instance, for comparison, a river like the Ruhr, in Germany, which has a very similar relation to the Westphalian coal fields and the iron and steel industry centered around that valley, that the Schuylkill has here in Pennsylvania, and a stream very similar in its topographical conditions to the Schuylkill—a limited flow in certain seasons of the year, subjected to freezing during certain months of the winter, a stream of such dimensions and such conditions of channel as to make it hardly feasible for improvement to large depth, for the larger carriers that move on the line, and still carrying for about fifty miles an active traffic, which handles the coal from those Westphalian mines and delivers it at the iron and steel establishments along the lower Ruhr, and in the neighborhood on the Rhine, in a very similar way to what you find, for instance, with a larger tonnage, of course, on the Monongahela at Pittsburgh; and that is a fact which you could repeat on more than one stream radiating from, or rather tributary to, the Rhine Valley, and its great metal industries. That is, under certain conditions of control that obtain there, the Government having a direct control of the freight rate by water and by rail, the full advantage, the full benefit, of any saving is available in the rate to destination of the product carried.

Here in this country, of course, we have no such condition of centralized control of rates, and, under the present status of railway regulation, we find this surprising condition, that, once traffic is built up and a lower rate obtained on an improved waterway, or on an existing waterway, and a railroad line parallels that waterway, it can apply to the Interstate Commerce Commission for a reduction of rate sufficient to meet the water competition, and have that reduction allowed to a sufficient point to drive the traffic off the water and retain it on its own lines; or, if it has an extension of line—as was the case in an interesting application a couple of years ago, involving a great traffic on the Hudson—if it is an extension of line, it may deny traffic to a water point nearer the point of shipment, where a large traffic had been built up before such an extension of line was made. That Rutland case was important from more than one standpoint, but the facts of it were briefly these, that there was a large tonnage of stone handled out of the Vermont quarries, which was carried by rail to the head of navigation on the Hudson River, at Troy, and there trans-shipped to barge lines on the Hudson and carried down to tidewater and delivered in and

around the City of New York. The Rutland Railroad later made further southern connections and got an outlet of its own in the City of New York, and refused to deliver that stone to the barge lines at Troy. An application was made to the Interstate Commerce Commission for some direction which would require the continuance of that transfer right at Troy, and it was refused, on the ground that the railroad, having the longer haul, ought to derive the benefit of it, and that the line should not be forced to relinquish the benefit by carrying the stone only on the shorter haul to Troy and there delivering to the river. So that it seems as if in this country the whole tendency at the present time is for the regulation of the railroad lines, under our governmental system of law, to co-operate with the railroad lines to drive the traffic off the water lines, and, at the session of the National Rivers and Harbors Congress, held and just brought to a close in Washington, it seemed to me that that point was emphasized no more strongly than it should be by the vice-president, who opened the session, in saying that, in his judgment, that was the first requisite for the United States Congress to adopt, if there were to be any successful use of the improved waterways which Congress is providing for by appropriation of funds, namely, that the traffic over those lines should be subject to the same control of the Interstate Commerce Commission, under such provision of law as would force the benefit of the cheaper haul by water, wherever it might be available, and force a pro-rating and transfer of freight at any suitable point between rail and water lines.

But, assuming that legislation of that kind may be adopted, which is Federal legislation, and which is perhaps a little far afield from the scope of the investigations of your Commission, I would like to place on record the general plan of the Federal Government for a system of waterways along the Atlantic seaboard, connecting all of the great ports and rivers and bays and sounds, which would provide a thorough distributing system for barge traffic of our bulk freight, such as coal and sand and lumber and brick and clay products and all that sort of thing, that it may be placed on record what the ultimate relation of these anthracite waterways will be to the general plan. There has been recommended by the Board of Army Engineers the construction of a free waterway across the State of New Jersey, between Bordentown on the Delaware River and the Raritan Bay at South Amboy, and the State of New Jersey has pledged itself to purchase and contribute to the Federal Government the necessary right-of-way for that waterway whenever Congress adopts the project and makes an initial appropriation for the

construction. There has been completed across Cape Cod in Massachusetts, by private capital, but still affording a modern waterway, a canal between Buzzard's Bay and Barnstable Bay, through which barge traffic is now passing in increasing amount. It can be seen readily enough that the completion of a modern waterway across the State of New Jersey would immediately open communication from the Delaware River and from all the streams entering the Delaware River to New York Bay and Long Island Sound, and to all of the points in New England which are heavy recipients of coal from the Pennsylvania and the Virginia fields. In the other direction there has been recommended by the Army Engineers the opening of a free waterway at sea level between the Delaware Bay and the Chesapeake Bay, following the line of the present Chesapeake and Delaware Canal, which the Engineers recommend that the Government take over on a valuation stated to be approximately the value of the bond issue of that canal company, and that is a definite recommendation for adoption by Congress, and there are rather definite hopes that Congress, in the next bill providing for river and harbor improvements, will take that project up and provide the money at any rate for the purchase of this property and for beginning the work of improvement. The Government has also now under construction an improved waterway between Hampton Roads and the Sounds of North Carolina, having acquired, three years ago, I think, the old Chesapeake and Albemarle Canal, which was of inferior dimensions and had been allowed to run into bad condition and disuse, and is now completing a 12 foot channel throughout the North Carolina Sounds, between Norfolk and Beaufort Inlet. All those inside passages are to be at the standard depth of twelve feet, and the idea is that they will permit the passage of barges with a minimum load of 1,000 tons and that the principal items of traffic handled through those inside passages and availing of the economies of barge transportation will be traffic in coal, and in iron and steel products, iron ore, and in stone and building materials and lumber.

The State of New York is now bringing to completion—has, according to the report of the State Engineer, about 93 per cent complete at the present time—the re-constructed Erie Canal, which, at a cost of approximately \$150,000,000, provided entirely by the State of New York, will afford continuous 12-foot navigation between Buffalo and the Hudson River at Troy, and between Oswego, on Lake Ontario, and the Hudson River at Troy, and between the St. Lawrence Valley, by way of Lake Champlain, again with the Hudson River at Troy, and connecting directly, through the Hudson River, with this coast-wise

chain of waterways, all of them, then, in ultimate connection and communication with these old anthracite canals.

So it is not a local question entirely. It looks far into the future, and it affords a chain of publicly-owned, free waterways, radiating in every direction, north and northeast and south and west, providing for the handling of tonnage originating on waterways.

If now we return to the anthracite field, and to the relation of the State of Pennsylvania to its development, we find that, of the five canals which were built in early days of this work, one has been legally abandoned. That is the Delaware and Hudson, its tow-path having been made the route for the construction of a railroad line under the same corporate management, which is now carrying coal out of the Honesdale field for New York and New England delivery.

By Mr. MacElree: Q. And that management is what, so that it may be upon the record? A. That management is the Delaware & Hudson Company, formerly the Delaware & Hudson Canal Company, now the Delaware & Hudson Company. Q. Railroad Company? A. I think it omits the word "railroad." I am not sure. Q. It is a railroad? A. It is a railroad. We find the old Morris Canal, which was built by private enterprise, in the expectation that it would afford an absolute monopoly of transportation across the State of New Jersey, so antiquated as to be a curiosity of engineering, and quite unavailable for any use under modern conditions. That is a canal on several levels, climbing the hills of New Jersey to the height of about 900 feet, and making the ascent by a series of inclined planes, and stationary engines. Application has been made by the lessees of that canal company, the Lehigh Valley Railroad, on several occasions to the State of New Jersey for permission to abandon the waterway, and if it were not for the great value of its terminals on the Hudson River at Jersey City, I suppose that the Legislature would readily enough have consented before this time; but the extreme value of those terminals, and the feeling on the part of the commercial interests of Jersey City that proper provision had not been given to the citizens of the State for relinquishing so valuable a property, has prevented such legislative action up to the present time.

We find, then, next to the Morris Canal, which connected the Delaware River, or still connects the Delaware River, at Phillipsburg and Easton with the New York Bay, at Jersey City, another canal across the State of New Jersey, namely, the Delaware & Raritan, also a lock canal, which carried up to the year 1871, I think, and reached its highest tonnage a little over 2,000.-

000 tons of coal, and which was leased for a long period, 999 years, I think, in the year 1871 to the Pennsylvania Railroad Company, and on which the tonnage of coal and of general freight has since then steadily declined, being at the present time, I think, about 300,000 tons a year. That canal certainly has not been maintained since the year 1871 in the condition of efficiency that it was before that time. The locks do not afford the full project depth, and under present conditions of handling bulk traffic of that kind, it has been found almost impracticable to load barges with sufficient freight to pay the cost of operation through the canal and the tolls through the locks.

Then we find these other two canals which were built under very different conditions, and toward which the State of Pennsylvania has a direct relation of interest, namely, the Lehigh Navigation Company's canal and the canal of the Schuylkill Navigation Company, the Lehigh Navigation Company's canal extending from Mauch Chunk to Easton and connecting there with the old Delaware Division Canal, built by the State of Pennsylvania in the days when it was constructing its public waterway system between the Delaware River and Pittsburgh, and subsequently sold by the State by the Sunbury & Erie Railroad Company, and from them acquired on a lease by the Lehigh Coal & Navigation Company; so that there is in continuous operation at the present time this old canal from Mauch Chunk to Bristol, on the Delaware River, with locks of a very unusually small dimension, and at the present time carrying something like 200,000 tons of coal per year out of a total shipment from that field, I think, of three to four million tons. Then out of the same anthracite field is the Schuylkill Navigation Company's canal, a waterway built under a similar charter, which reached a maximum freight-handling capacity in the late 60's of nearly 2,000,000 tons, for the abandonment of which the present lessees, the Philadelphia & Reading Railway Company, once asked for permission of the State of Pennsylvania, but such legislation was not adopted, and over which there is moving at the present time very little coal traffic.

Of these two canals, the Schuylkill Canal was originally, I suppose, the better constructed. It had a larger proportion of slack water, that is, river navigation, produced by dams and locks, while with the Lehigh Canal there was built all along the Delaware River this Delaware Division Canal, which, I suppose, if it had been handled as an engineering proposition, would have been located on the other side of the river, where the land is more level, but, being built by the State of Pennsylvania itself within its own boundaries, was squeezed in between the Palisades

of the Delaware River, the canal embankment being in different places built right out into the river, affording no room for canal construction of any suitable dimensions. Q. Have you any figures or data at all, Mr. Schoff, as to the original expense of construction of either of those two canals? A. Yes, sir. Q. Are they in such shape that you could give them to us? A. With your permission, I would like to file with the Commission a tabulated statement of that. I have not brought it with me. Q. I did not mean to interrupt you, but it just came into my mind that, if the Legislature takes this question seriously into consideration at this session, it will probably want some information as to the original expense of the construction. In other words, if there is any possibility of the State taking over these canals, they would want to know something about their valuation, and I suppose would want all the data that they could have. A. Those are all matters of record. I have copies of them, I think, in my possession, and I will be very pleased to submit to the Commission a statement. Q. Will you submit that promptly, so that we may have it available for our report? A. Yes, sir. In general figures, but subject to confirmation, the Lehigh Canal cost in the neighborhood of two million and a half dollars and the Schuylkill Canal about two million. Q. When you speak of the Lehigh Canal you speak of the one simply from Mauch Chunk to Easton? A. Mauch Chunk to Easton, yes. If either one of those waterways had been constructed more recently, more nearly our own time, I suppose there would have been no doubt that they would have been carried through as canalized river navigation, rather than as small capacity barge canals; but at that time the engineering practice was in the other direction, and the report was that European experience showed that the barge of limited capacity was the most cheaply handled. That might have been the case at that time, but certainly is not at the present time, when the State of New York has recognized the thousand-ton barge as the minimum barge, below which it seems to be unprofitable to handle bulk freight.

The State of Pennsylvania, then, has these two canals. of small capacity, which are, however, not used at the present time to within one-tenth of the use given them thirty years ago, and which are under the direct control of other interests than the public interest that was originally contemplated, I think there is no doubt, by the State of Pennsylvania when the charter rights were granted that provided for their construction. The charter, that is, the Act of Assembly, which formed the Schuylkill Navigation Company, and the Act which formed the Lehigh Naviga-

tion Company, were very similar in their provisions, and it was thought, I suppose, then, that the State of Pennsylvania was getting a very good bargain, when private capital could be induced to go in and develop those streams, which theretofore had been entirely undeveloped and unavailable, in regions that then were almost entirely unsettled. It is interesting to note that in neither Act of Assembly was there any provision made for the duration of the charter rights. They were entirely indefinite. The companies were directed to enter on the streams and to make certain improvements, and to provide canal or slack-water navigation between various points, and were given in both cases the right to the exclusive use, to the use of the entire waters of the stream, not only for navigation purposes but for the generation of power. In the case of the Lehigh Company that privilege was not limited in any respect. In the case of the Schuylkill Navigation Company, any funds received from the sale or lease of water power were to be paid into stated funds in certain ways, accounted for, and the proceeds applied to the improvement of navigation on the stream, and to providing new or re-constructed locks or structures. How far that requirement may have been observed I have had no occasion to inquire, and I do not know whether it is a matter of record. But that is one of the provisions of the Act.

Only a few years after the opening of the Lehigh Canal, it was made the subject of very bitter comment in the State Legislature. There was a great agitation against the Company, and a great conflict of interests, of course, conflicting investors in coal lands, which ultimately brought about the construction of the rival railroad lines of the Lehigh Valley, the Lehigh Valley Railroad Company, and the Lehigh & Susquehanna, which was built by the Lehigh Coal & Navigation Company and later leased to the Central Railroad Company of New Jersey. Two committees of the Legislature were appointed to investigate the whole matter of the charter rights granted these companies, and to report what steps, if any, the State of Pennsylvania should take to secure to the people the rights which they had expected to secure, namely, the free and unobstructed use of these improved waterways. I have had copied and brought here, and submit as a matter possibly of interest, the report of the Majority Committee of the Pennsylvania Legislature in 1832 on that subject.

(Report filed with Commission as Schoff Exhibit No. 1.)

It was the decision of both the Committees that at that time the Canal Companies were operating entirely within their rights; that is, that they had been given almost rights of monopoly

over both streams, and that it was incumbent upon the State of Pennsylvania to determine whether the Legislature, if it had granted the original rights, was competent to make such broad and extensive grants; and I suppose that if the United States Government had ever been brought party to those proceedings, it would have raised immediately the question as between the prior right of the Federal Government to the use of all navigable streams and the Legislature of Pennsylvania, how far it might have been competent to grant such unlimited rights, without any time limitation set to the exclusive use of navigable water. That, I think, has never been brought into question in the history of either company, and the Federal Government never has been made a party to any test of the duration or competency of such privileges.

I submit, also—not as a lawyer, for I am not a lawyer—but, as, I think I have been informed, a leading case on this question, a transcript from the reports of the Supreme Court of the United States, January Term, 1829, on the Blackbird Creek Marsh case, in the State of Delaware, which established the prior right of the general government, and the rights of the different States to enter on navigable waters only in so far as the general government had not otherwise restricted them.

(Report filed as Schoff Exhibit No. 2.)

With reference to these two valleys, the Lehigh and the Schuylkill—and the Lehigh must be taken in connection with the Upper Delaware River itself—in my judgment there is no doubt at all that, if improved as streams having slack-water navigation, and if given modern structures, similar to the structures that you will find on the River Ruhr, in Germany, they would afford cheap and direct navigation from the anthracite coal fields to the seaboard, and, through these connecting passages, to New England and to New York State, to the points where there is the heaviest delivery of coal, and that at the same time they would provide for generating a very large amount of power, hydro-electric power, which could be utilized in a great many different and valuable ways. But that would involve a relation of the State of Pennsylvania and the Federal Government on which no plan has yet been worked out. Surveys have been made by the Army Engineers of the Upper Delaware between Trenton and Easton. There is a fall there of about 165 feet. By the construction of about ten dams across the river, the old Delaware Division Canal would be made entirely unnecessary, the river itself would be made navigable, and, of course, that being an interstate stream, is subject to the jurisdiction of the

Federal Government. As I say, no action has yet been taken, but it is entirely within the possibilities of the next generation that such work may be undertaken.

The United States Government has further asserted its jurisdiction over the Schuylkill River, even in contravention of rights granted by the lessees of the Schuylkill Navigation Company, and has made lines, for instance, beyond which dumping may not be carried on, so as to provide for open and unobstructed navigation of the stream and flow of the water, and there is no doubt that the Government could at any time assert a general control of that stream up to the head of possible navigation. However, the navigation might have been provided, that is, whether by natural flow or by slack-water navigation, through structures such as locks and dams.

In appearing before you, I have done so without any thought of making a definite suggestion of action by the State of Pennsylvania, but rather with the hope of emphasizing the fact that the State has a very direct responsibility to the people of the United States and to the United States Government for maintaining navigation on these two streams, the Schuylkill and the Lehigh, on which its Legislature has given such unusual and unlimited rights, and that some plan of co-operation between the State and the Federal Government, which would provide for the fullest utilization of those streams for the purposes of commerce, is most desirable. How it would be worked out, for the acquisition of such rights of navigation, which we have been told the present lessees of the original corporation do not now consider of value, is not for me to suggest. And yet the experience shows that in Germany, over a distance no greater than that between the anthracite coal fields and tidewater on the Delaware River, over a distance approximately the same, coal is carried at rates considerably less than one-third those prevailing for the carriage of coal at the present time between our anthracite fields and tidewater.

By Mr. MacElree: Q. Do those rates provide for the carrying to the wharves at the point of loading, and for the expense of loading, and the expense at the point of destination of unloading and re-loading upon cars there? You speak of the rates prevailing in Germany as being approximately a third of the rate here. I presume you refer to a third of \$1.70? A. Yes. Q. Or, is that merely the actual cost of the water transportation? A. That is the cost of carrying the coal from the mines to the point of delivery along the Ruhr and along the Rhine, in the immediate vicinity of the mouth of the Ruhr. The conditions are somewhat different, the topographical conditions, from the Delaware, in

that the large industries are located along the river bank, much more closely as they are in Pittsburgh, so that that has been developed to the very fullest. But you have here in our own vicinity the same conditions growing up. You have the great steel plants along the Delaware River, the great ship-building plants, the growing iron foundries and pipe establishments on the upper river, and a tendency which is going to carry the Delaware River, within the next ten years, in my judgment, far beyond any industrial activity that you would find at present on the Rhine. So that it is more than a present problem a great deal. It is a problem of the public saving, I should think, of one-half of the present cost of carriage from our anthracite fields to this tidewater industrial development. Q. This is a phase of the investigation that has sprung up very recently, sprung up in fact, since the first suggestion made by Mr. Magee, and coming originally from him, and this Commission, having very meagre information on this subject, would be glad to have your judgment as to the—I should not say sanity, but feasibility, of the recommendation to the Legislature suggesting to them the advisability of a further investigation, either by a properly constituted Commission or under the supervision and direction of the existing Public Service Commission, of this canal proposition as an entirety. Mr. Magee estimates that such an investigation as that might necessitate the expenditure of possibly \$250,000. A. It would involve very comprehensive surveys, of course, that would take into consideration not only the navigation of the stream, but the water power that could be generated there, and the damage that might be occasioned through overflow of land and railroad rights-of-way by the construction of dams for slack-water purposes. Q. In view of your knowledge and experience, and intimate acquaintance with the Atlantic Waterways Association, and with your knowledge of data and figures incident to that, in your judgment would such an investigation, costing as it might, in the neighborhood of a quarter of a million dollars, be an investigation that would be worth while for the State of Pennsylvania to undertake? A. I believe that it would be worth while for the State of Pennsylvania to go into this question thoroughly, and that perhaps at the present time, or in the near future, it would be appropriate for the State to do so, for the double reason that the State, in granting these unusual charter rights, really made itself a trustee to the interests of the whole people, that is, of the United States Government, to see that navigation should be maintained and that the free use of those waters by the people should be provided for. Now at the present time it is self-evident that the original objects of those grants

have not been maintained, and that for various reasons the waterways are not given the use that they might have. Q. For very obvious reasons, that they are practically under the control of the railroads? A. And that there is no disposition of the present holders of those rights to make any development of them, and the assertion that the rights are no longer considered of any value. If, then, the present holders of those rights do not propose to make such development, it is incumbent on the State to unravel that tangle and put the streams back in the condition that they were in when the rights were granted, either by exercising its right of eminent domain, or in some way by acquiring those rights back from the present holders to make those very important valleys available for modern use. I do not wish you to consider me as a canal crank at all, or as an enthusiast on the subject of waterway traffic, and personally I doubt the advisability of canals of the small dimensions of the Lehigh, for instance, or of the Upper Schuylkill—I doubt if it would be feasible for them to be operated profitably under present conditions at all. Provision must be made, if at all, for handling in much larger units. And yet there is the possibility, very unusual possibility, for joint co-operation between the State of Pennsylvania, the State of New Jersey in the case of the Delaware, and the United States Government, for water developments on the dual plan of navigation and hydro-electric power generation, involving legislation, which, of course, is still required; that is, what the attitude of the general government will be toward the construction of dams in navigable streams, and toward the letting of corporate rights for the use of power so generated. Bills for making such provision have been pending in Congress and fought over between the conservationists and anti-conservationists, and I hope will come to a solution in this Congress.

By the Chairman: Q. Do you mean this present session of Congress or the next session? A. The General Dam Bill was passed, I think, by the House and is now pending in the Senate, and there is good hope of its passage, and that will lay out a general plan or basis for the granting of rights to construct dams, reserving to the people always the right to insist that locks shall be maintained and navigation kept open, and I suppose that that will perhaps tend to stimulate such construction on a great many streams in the South, where there is a large rainfall and a constant water supply, more perhaps than it will here. But here are those very unusual rights, a century old. The Lehigh Company was chartered, I think, in 1818, and the Schuylkill Navigation Company about in 1811 or 1812, originally, and it seems as if the rounding out of a century of experiment with that form

of relationship between the State and the corporation supposed to represent the State in maintaining navigation for the free use of the people, might be a good time to review the whole question and set the State with an outlook toward the future of co-operation with the whole people in securing whatever benefits there may be of those topographical conditions. Q. You, no doubt, read the interview with Mr. Magee, did you? A. Yes, sir. Q. Did you read an account of his testimony given before the Commission? A. Yes, sir. I have had the pleasure of discussing the question with him more than once personally, too. Q. As a general proposition, do you regard his plan as a feasible plan, the canalizing of the two river routes? A. I think it is entirely feasible. Q. And practical? A. Feasible and practical, and that it would provide not only for navigation—if considered only from the standpoint of the freight tonnage that would move over the streams, I doubt if it would return an interest on the investment, but if developed by some joint agreement between the Federal Government and the State, and possibly further private interest, in combining power generation with navigation, I believe that it would be entirely appropriate for the State to do, and a very desirable thing for it to do. Q. But you think by merely carrying the tonnage, it would not be a paying proposition? A. There is about a 500-foot fall in the Schuylkill River from the coal fields to tidewater, and that would mean—I can speak only in the most general way of where the dams would be located—but it would mean probably twenty dams, each one of which might cost in the neighborhood of three-quarters of a million dollars. The interest on that would have to be considered as the cost of maintaining navigation in that stream, and I suppose that the State would hardly levy tolls on such navigation. The State of New York, by constitutional limitation, cannot levy any tolls on barge canals. That is a free waterway.

By Mr. MacElree: Q. The dams would approach a cost of \$15,000,000, then? A. Yes. I am speaking only in the most general figures.

By the Chairman: Q. That would be on the Schuylkill River? A. Yes.

By Commissioner Lafferty: Q. Did not one of the coal-carrying companies that operate one of the canals, within recent years make an extraordinary effort to increase their tonnage on the canals, and did they not do so, but then changed their policy quite rapidly for some reason or other? A. That is quite true, sir, and I am glad of the question. The Lehigh Company did for several years make quite an earnest effort to develop the business on its canal, to see whether, given the small dimensions

of that waterway, any plan could be worked out for handling coal over it and return freight back, so as to make it pay. A good deal of money was spent, both in experimenting with electrical traction and with compressor gas engines, and with various forms of motive power, and there was an active effort made to build up a return package freight from Philadelphia back to Easton and South Bethlehem, and for a time it seemed to be successful and then it suddenly stopped, and the Company practically withdrew, I think, from the package freight business. I think that the attitude of the Interstate Commerce Commission had much to do with the unsatisfactory ending of that enterprise; that is, that it was found that the Company—which is true—has no rights of a common carrier, that it can maintain only a waterway for the passage of freight. The same is the case with the Schuylkill Canal. The Schuylkill Navigation Company cannot operate its own boats. The lessees, Philadelphia & Reading Railway Company, when they made any serious effort to use the canal, owned the boats and operated them over the canal. Furthermore, the Interstate Commerce Commission immediately—the influences that were evident there operated against the filing of rates by this Canal Company that was not a common carrier, and in very many ways discouraged and prevented any further development of that work.

Mr. MacElree: Their charters are a peculiar mixture of grants and restrictions.

Mr. Schoff: They are very interesting reading, and if it would be of any help to the Commission I will be very pleased to file to-morrow or Monday copies of both of those Acts. I have them on file conveniently.

Mr. MacElree: Will you mail them to me at West Chester?

Mr. Schoff: Yes, sir, be glad to. I think, as the events proved, of course, they seem perhaps unreasonably extensive, but under the conditions that obtained at that time they were not so surprising, because the whole coal business was in its infancy. The question of the possible value of anthracite coal was very uncertain. Here were a few people who were thought to be visionary enthusiasts, going to the Legislature and asking for rights over streams that were very little used and over which the Commonwealth had for some years endeavored in vain to have transportation facilities afforded. So that it was a case then of the Commonwealth being more anxious to get the improvement, perhaps, than it would be at the present time, and very much larger grants were made than would have been given even ten years later, when this bitter controversy over them developed.

Mr. MacElree: Mr. Lafferty has suggested to me, Mr. Schoff, that it might be well to have on record the same question which we asked Mr. Warriner, and I think Mr. Magee, whether in the event that the Legislature should see fit to either constitute a Commission to investigate this matter of utilizing these canals or canalizing the river routes, or of giving the matter to the Public Service Commission for a full and complete investigation, the Atlantic Deeper Waterways Association would be willing to co-operate to its fullest extent in such an investigation.

Mr. Schoff: Very freely and gladly; would afford any co-operation that might be desired.

By Mr. MacElree. Q. And allow such a Commission to avail itself of any data or information which are in your hands? A. Entirely so, yes, sir. Q. Your Association has been in existence how long? A. Ten years. Q. And during that time has been actively engaged in this deeper waterways movement? A. It was organized with the hope of systematizing the plans for waterway improvements, more especially under the Federal Government, which up to that time had been perhaps more unsystematic, more haphazard, than is at present the case, and it has actively worked for favorable recommendation by the engineers on the surveys that it urged, and has been partially successful in having Congress adopt its projects and provide funds for their completion. Necessarily a movement like that must be rather slow. Congress does not quickly jump at any large plan of that kind, and works piecemeal from year to year. Q. I assume that it is fair to infer that the State Legislature will not jump at any investigation that is calculated to cost a quarter of a million. It is likely that they will want to make some minor investigations first, I assume, to determine the feasibility and possibility of the larger and more complete investigation, because our information is going to be very limited, of course, as to this proposition. A. I have, of course, no knowledge of the details on which the estimated cost of a quarter million dollars is based. Q. I think that estimate was like one or more of yours, one that Mr. Magee did not want to be bound to at all, but felt it would be large enough, probably, to cover a pretty thorough investigation of the four propositions that he suggested, the two existing canals and the possibility of canalizing the two river routes. A. If my memory is correct, the last River and Harbor Bill of the United States Congress provided \$250,000, it may have been \$300,000, for surveys on all the projects ordered in that bill, which were about eighty-five in number. Q. Is it quite possible that this would not approach the figure which Mr. Magee suggested? A. It is possible that the cost would be less than that figure.

Commissioner Lafferty: I think he based his figure on the Erie Canal appropriation.

Mr. MacElree: And he said, of course, with them the route was very uncertain. He said in their instance it involved the investigation of all possible routes, whereas the route in this instance was determined in advance.

Mr. Schoff: Absolutely determined. The valleys are there and the hills rise up on either side, and there is no possible variation of the route.

Mr. MacElree: Yes, they either have to come that way or not at all.

Mr. Schoff: It would be a question of locating the most available points for dams.

The Chairman: We wish to thank you for coming here. Your testimony has been very interesting and very instructive to us, and we are certainly obliged to you.

Mr. Schoff: I am very pleased if at any time I can be of any service to you.

Mr. Schoff also filed with the Commission a pamphlet entitled: "The Atlantic Intra-Coastal Waterway. The Project Advocated by the Atlantic Deeper Waterways Association. Official Survey Lines and Present Status of the Work in its Various Sections."

(Marked Schoff Exhibit No. 3, December 8, 1916.)

Mr. Schoff also filed a tabulated statement taken from Hazard's Pennsylvania Register, showing mining and shipment of coal over the Schuylkill Canal.

(Marked Schoff Exhibit No. 4, December 8, 1916.)

Also a tabulated statement from the same source showing receipts of Lehigh, Schuylkill and Lackawanna coal in Philadelphia.

(Marked Schoff Exhibit No. 5, December 8, 1916.)

ADJOURNED.

CONCLUSIONS.

The possibilities offered with respect to transportation costs by the testimony of Mr. Magee and Mr. Schoff, are of such vital importance to the citizens of Pennsylvania and have been thrust before your Commission at such a late date as to permit of little more than casual examination, that your Commission is

of the opinion that the broad proposition set out therein might most properly and advantageously be referred to a subsequent Commission or proper agency of the State for careful and diligent study and thorough examination.

If the costs of transportation of anthracite coal can be reduced one-half of the amount which is suggested in the foregoing testimony it would be well worth while the careful study of a further competent Commission.

FOURTH. THE COST OF SELLING AND THE PROFITS OF THE MIDDLE MAN.

Anthracite coal is sold in three ways by the Pennsylvania operators, the first of which are the instances where the operators themselves sell their output through a sales department of their own. The second one where the operators sell the output through a selling agency, either unassociated with, or affiliated with, the operator at a fixed price per ton for the selling agents in connection with the operation. The third one, where the operators sell their entire output either to a selling agency or larger operator, who maintains a sales department, at a fixed percentage of the current market price for the product.

Methods of selling anthracite.

In the instances where sales departments are maintained by the operators themselves the Commission has endeavored to determine the actual expense per ton to the producing operator for the maintenance of his sales department and to compare this expense, which appears could be made the minimum selling expense, with the amounts paid by other operators to selling agents or other concerns for handling the output.

Selling expenses.

The table on next page is a compiled statement of selling expenses, including the operation of storage yards and operation of barges at a loss, of the Lehigh Coal & Navigation Company for the years set out therein.

From the testimony produced before your Commission at its hearings, it appears from the sworn statement of H. H. Lineaweaver, president of H. H. Lineaweaver Company, Inc., handling a tonnage of from five to six hundred thousand tons a year, that the actual expense of selling coal amounts to 7½ cents a ton.

Selling expenses of middlemen.

The average commission paid the selling agencies, such as H. H. Lineaweaver & Co., is fifteen cents a ton on prepared sizes and ten cents a ton on steam sizes.

Figures are lacking with respect to the actual selling expenses of corporations like the Lehigh Valley Coal Sales Company, who market the entire output of the Lehigh Valley Coal Company on a basis of paying the Lehigh Valley Coal Company sixty-five per cent of tidewater prices and receiving for their own commission the remaining thirty-five per cent less the freight. The same company, the Lehigh Valley Coal Sales Company, handles the entire output of the G. B. Markle Company on a flat basis of 12½ cents per ton on all sizes. Whatever the selling expenses

Sales on 65 per cent. basis.

STATEMENT OF SELLING EXPENSES

Including operation of Hauto storage yard, and operation of barges, deficit, for the years 1913, 1914, 1915, and nine months to September 30, 1916.

	1913	1914	1915	Nine Months Ending Sept. 30, 1916
Tons of Coal Sold	3,529,094.00	3,572,641.10	3,583,743.09	2,774,808.18
1. Superintendence—salaries	\$18,585.74	\$17,865.76	\$18,797.59	\$17,488.82
2. Superintendence—expenses	11,190.20	12,140.80	11,986.84	13,547.69
3. Salesmen—salaries	23,133.33	23,846.90	26,989.88	20,185.83
4. Salesmen—expenses	7,681.88	9,798.24	11,387.18	7,506.54
5. Commissions	15,410.87	39,437.42	63,829.26	30,318.76
6. Advertising	4,898.52	5,480.99	8,189.56	3,062.06
7. Local agents and clerks	5,621.49	6,741.65	7,043.43	5,420.15
8. Local agency sundry expenses	2,156.74	2,272.94	6,662.86	5,624.94
9. Stocking and loading labor	13,228.99	13,297.24	17,742.88	13,134.52
10. Tools and supplies	260.42	196.09	3,028.14	3,227.07
11. Demurrage	278.23	3,927.56	12,410.89	10,538.78
12. Plant maintenance	4,180.62	3,919.94	3,593.89	7,589.44
13. Plant depreciation	2,675.00	2,675.00	4,619.75	5,506.13
14. Cargo insurance	4,101.45	3,023.23	3,050.45	1,802.05
15. Plant insurance	311.94	735.17	1,593.20	1,084.35
16. Stock shrinkage	42,421.27	47,749.94	63,790.90	34,351.42
17. Taxes	4,784.15	4,778.05	5,700.29	4,304.51
18. Rentals—net	2,173.66	969.86	862.14	762.77
19. Collection expenses .....	.....	95.71	1,760.61	.....
20. Personal injuries .....	.....	.....	.....	627.04
Total District Selling Expenses ..	\$158,747.18	\$197,012.77	\$271,315.46	\$184,557.33
A. Administrative salaries	\$14,720.75	\$15,157.93	\$15,590.00	\$21,102.68
B. Administrative expenses	9,107.57	6,866.71	8,778.73	8,420.79
C. Advertising	2,705.85	2,093.87	2,827.75	3,483.13
D. Department Accounting salaries ..	10,392.30	9,814.11	10,329.03	8,080.73
E. Department Accounting expenses ..	2,929.73	3,222.67	3,201.85	4,613.33
F. Collection expenses	231.26	.....	.....	1,206.60
G. Sundry expenses	46.80	.....	.....	.....
H. Uncollectable accounts .....	.....	.....	.....	22,244.85
General Selling Expenses	\$40,134.26	\$37,155.29	\$40,727.36	\$69,152.17
Opern. Hauto Stg. Yd. to Sept. 1st ..	44,817.57	.....	.....	.....
Total General Selling Expenses ..	\$84,951.83	\$37,155.29	\$40,727.36	\$69,152.17
Total Dist't & Gen. Selling Expenses ..	\$243,699.01	\$234,168.06	\$312,042.82	\$253,709.50
Operation Hauto Storage Yard ..	22,064.28*	60,970.11	79,239.52	98,031.67
Operation of Barges—Deficit	11,420.49	55,856.77	40,424.62	39,313.44
Total	\$277,183.78	\$350,994.94	\$431,706.96	\$391,054.61
Per Ton .....	.0786	.0982	.1205	.1409
Degradation included in operation of Hauto Storage Yard	\$14,962.53	\$2,548.82	\$4,220.42	\$22,240.00
*September 1 to December 31, 1913.				

of the Lehigh Valley Coal Sales Company may be it is not to be wondered that officials of the Lehigh Valley Coal Company regret the arrangement they made, when it is noted that since March, 1912, on a capitalization of \$10,000,000 the Lehigh Valley Coal Sales Company has been able to declare annual dividends of ten per cent and an additional stock dividend of twenty-five per cent.

It can readily be seen that the selling agents, selling on this basis, are constantly enjoying a larger margin of profit, due to the ever increasing price of anthracite coal, of which they receive thirty-five per cent, and out of which they pay the item of freight, which is ever a fixed and determined item. It is also to be noted that the operators selling their output under such a contract instead of receiving the full benefit of any increase in the price of coal, receive only sixty-five per cent of such increase, yet are themselves absorbing almost the entire additional expense of the operation, inasmuch as there is nothing to indicate that selling expenses have increased with anything like the rate at which operating expenses have, and were these operators so selling, to sell their own output and to apply the profits now enjoyed by the middle men to their own margin of profit now realized on the operation of producing, the gross margin of profit per ton with these operators would be substantially increased.

In many instances the operators producing anthracite coal are practically compelled to sell their output on the basis referred to and with respect to the Lehigh Valley Coal Company the method adopted by them was one of their own choosing, or rather of the choosing of the Lehigh Valley Railroad.

CONCLUSIONS.

Your Commission fully realized that it would not always be either profitable or possible for a small operator to conduct his own sales department with any certainty of being able to market his coal and believe that a basis of fifteen cents a ton on prepared sizes and ten cents on steam sizes is not an unfair method of payment to the selling agent, but believe further that the establishment of the Lehigh Valley Coal Sales Company, or a general tendency to permit the large operators to market the output of smaller concerns, has a distinct tendency to unnecessarily increase the price of anthracite coal, and find as a fact that there is no justification for the increase so occasioned. The proportion retained by the selling agent in the operations conducted in this manner on all shipments is greatly in excess of the commission

Unnecessary
selling expenses.

generally paid where a flat rate is in effect. By reference to the table set forth earlier in the report and determining in actual figures what thirty-five per cent of current tidewater prices is, and deducting from this amount the item of freight, the truth of our conclusions can readily be established. And by considering merely one factor, that of the recent increase due to the new wage agreement, which amounts in round figures to thirty cents a ton, which increase the operators claim was justified and necessary, the Commission believes that if thirty-five per cent of this amount were not being diverted to the profits of the selling agencies a smaller increase in the cost of coal, to wit, sixty-five per cent of the present increase, would have met the needs of the operators.

FIFTH. THE COST OF DISTRIBUTING AND THE PROFITS OF THE RETAILER.

In determining the profits of the retailer the situation is somewhat less complicated than with respect to the operator, inasmuch as the only two items necessary to be fixed in order to determine the gross margin of profit of the retailer are first, the cost to him of the coal, either f. o. b. mines or delivered, and secondly, the retail price of coal. Both of these two items are easily determined as of any given date and the difference between the two represents the gross margin of profit of the retailer.

Retailers'
profits.

Your Commission called before it in connection with this phase of the investigation, representative retail coal dealers of various parts of the State and mailed upwards of two thousand letters of inquiry to other dealers within and without the State. Their replies, both oral and written, indicate a somewhat varying margin of profit, even amongst dealers doing business in the same place. It must be recalled in this connection that the figures hereinafter referred to apply to long tons, by which is meant 2,240 pounds of coal, in both the price paid for the same to the operator and the retail price of the same to the consumer. As distinguished to this condition in Philadelphia, the New York retailer buys his coal by the long ton and sells a ton of 2,000 pounds, which very substantially increases his margin of profit.

Scope of
inquiry.

The following table, compiled by the George B. Newton Coal Company, which is a combination recently formed absorbing eleven companies and representing thirty-six yards, shows the average price, per ton, to the consumer, the average cost per ton, to the company, the gross margin of profit, the average expense, per ton, of delivery and the net profit or loss per ton on the operation, from November, 1913, to August, 1916.

Newton
Company.

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	1913				1914				1915				1916			
	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February
Average price per ton.....	\$4.75	\$4.80	\$4.88	\$4.90	\$4.70	\$4.88	\$4.63	\$4.21	\$4.07							
Average cost per ton	3.83	3.83	3.89	3.90	3.69	4.06	3.68	3.37	3.27							
Gross profit per ton .....	.92	.97	.99	1.00	1.01	.82	.95	.84	.80							
Average expense per ton .....	.93	.77	.80	.83	.89	.88	1.04	1.28	1.32							
Net profit per ton .....	.01	.20	.19	.17	.12	.06	.09	.44	.52							
1914																
Average price per ton	\$4.42	\$4.87	\$4.78	\$4.70	\$4.78	\$4.86	\$4.84	\$4.75	\$5.03							
Average cost per ton	3.46	3.82	3.75	3.68	3.75	3.83	3.81	3.72	4.04							
Gross profit per ton .....	.96	1.05	1.03	1.02	1.03	1.03	1.03	1.03	.99							
Average expense per ton	1.14	1.05	1.00	1.02	.86	.91	.92	.92	.95							
Net profit per ton .....	.18	....	.03	....	.17	.12	.11	.11	.04							
1915																
Average price per ton	\$4.71	\$4.34	\$4.11	\$4.14	\$4.53	\$4.75	\$4.63	\$4.66	\$4.64							
Average cost per ton	3.76	3.43	3.28	3.27	3.58	3.74	3.65	3.67	3.63							
Gross profit per ton .....	.95	.91	.83	.87	.95	1.01	.98	.99	1.01							
Average expense per ton	1.14	1.27	1.29	1.18	1.07	.88	.83	.83	.84							
Net profit per ton .....	.19	.36	.46	.31	.12	.12	.15	.16	.17							
1916																
Average price per ton	\$4.71	\$4.72	\$4.67	\$5.07	\$5.07	\$4.68	\$5.07	\$4.68	\$4.64							
Average cost per ton	3.69	3.76	3.75	4.03	3.97	3.76	4.03	3.76	3.63							
Gross profit per ton	1.02	.96	.92	1.04	1.10	.92	1.04	.92	1.01							
Average expense per ton .....	.84	.85	.99	1.14	1.25	1.69	1.14	1.25	.84							
Net profit per ton .....	.18	.11	.07	.10	.15	.77	.10	.15	.17							

It will be noted from the above that the average gross margin of profit approached one dollar during the greater part of the period covered and it will also be noted that the expense, per ton, of delivery was constantly increasing.

Cummings
Company.

The following table, compiled from the testimony of E. J. Cummings, shows the gross margin of profit from two yards of the four operated by Mr. Cummings during the years 1914, 1915 and 1916.

	1914	1915	1916
First yard	\$1.444	\$1.525	\$1.53
Second yard	1.198	1.265	1.245

In connection with the above figures it is necessary to have in mind that the gross margins include an increment of what is known as carrying charges, coal being carried into the cellar, which increases the margin to the extent of twenty-five cents a ton, and which is charged off against the gross margin of profit as a part of the delivery charge.

Carrying
charges includ-
ed in profit.

The net margins of profit on the figures of the above table during the three years were

	1914	1915	1916
First yard	\$.212	\$.244	\$.094
Second yard .....	.093	.111	.051

Gross profit.
Delivery costs.

and these figures being arrived at without allowing anything for depreciation, mercantile interest or the salary of the principal.

The following table shows the gross margin of profit on a cash business conducted by the Terminal Coal Company, of which James E. Kunkel is the owner, for the year 1916:

Egg	Stove	Nut	Pea
\$1.50	\$1.50	\$1.65	\$1.40
1.192	1.192	1.192	1.192

These figures, from the testimony of Mr. Kunkel, make no allowance for the item of degradation, which, from accurate figures made by him, show the coal he is getting at the present time is losing at least five per cent from this cause.

Calculations of the same sort show that retail dealers in western Pennsylvania, where the demand for anthracite coal and its consumption for domestic purposes is inconsiderable, have a net profit from the operation which practically amounts to teaming at 70 cents an hour, by which is meant that after deducting the expenses of distribution other than that of delivery from the gross margin of profit there remains a balance of 70 cents, applicable to the items of labor and teams.

Net profits in
western
Pennsylvania.

The following table, which your Commission pleases to style as the average cost of four sizes of anthracite coal to the retailer and to the consumer, shows the range of price from January, 1913, down to the present time, and the margin of profit to the retailer during that period.

Tables of
average whole-
sale and retail
prices.

This table, of course, compiled from some four hundred replies, does not fit many isolated cases where the items of freight, premium coal, hill hauling and a combination of anthracite and bituminous business, make it impossible to draw comparisons, but does show with respect to eastern Pennsylvania, the increasing cost to the consumer of the various sizes of anthracite coal.

EGG COAL

1913	Cost to Retailer	Cost to Consumer	Gross Profit
January	\$5.45 Flat	\$6.75	\$1.30
February	5.45 "	6.75	1.30
March	5.45 "	6.75	1.30
April	4.95 "	6.25	1.30
May	5.05 "	6.35	1.30
June	5.15 "	6.45	1.30
July	5.25 plus tax	6.55	1.20
August	5.35 "	6.65	1.20
September	5.45 "	6.75	1.20
October	5.45 "	6.75	1.20
November	5.45 "	6.75	1.20
December	5.45 "	7.00	1.20
1914			
January	5.45 "	7.00	1.45
February	5.45 "	7.00	1.45
March	5.45 "	7.00	1.45
April	4.95 "	6.50	1.45
May	5.05 "	6.60	1.45
June	5.15 "	6.70	1.45
July	5.25 "	6.80	1.45
August	5.35 "	6.90	1.45
September	5.45 "	7.00	1.45
October	5.45 "	7.00	1.45
November	5.45 "	7.00	1.45
December	5.45 "	7.00	1.45
1915			
January	5.45 "	7.00	1.45
February	5.45 "	7.00	1.45
March	5.45 "	7.00	1.45
April	4.95 "	6.50	1.45
May	5.05 "	6.60	1.45
June	5.15 "	6.70	1.45
July	5.25 "	6.80	1.45
August	5.35 "	6.90	1.45
September	5.45 "	7.00	1.45
October	5.45 "	7.00	1.45
November	5.45 "	7.00	1.45
December	5.45 "	7.00	1.45
1916			
January	5.55 Flat	7.00	1.45
February	5.55 "	7.00	1.45
March	5.55 "	7.00	1.45
April	5.55 "	7.00	1.45
May	5.45 "	7.10	1.65
June	5.55 "	7.20	1.65
July	5.65 "	7.30	1.65
August	5.75 "	7.40	1.65
September	5.85 "	7.50	1.65
October	5.85 "	7.50	1.65
November	5.85 "	7.50	1.65
December	5.85 "	7.75	1.90

STOVE COAL

1913	Cost to Retailer	Cost to Consumer	Gross Profit
January	\$5.70 Flat	\$7.00	\$1.30
February	5.70 "	7.00	1.30
March	5.70 "	7.00	1.30
April	5.20 "	6.50	1.30
May	5.30 "	6.60	1.30
June	5.40 "	6.70	1.30
July	5.50 plus tax	6.80	1.20
August	5.60 "	6.90	1.20
September	5.70 "	7.00	1.20
October	5.70 "	7.00	1.20
November	5.70 "	7.00	1.20
December	5.70 "	7.25	1.45

1914			
January	5.70	"	7.25
February	5.70	"	7.25
March	5.70	"	7.25
April	5.20	"	6.75
May	5.30	"	6.85
June	5.40	"	6.95
July	5.50	"	7.05
August	5.60	"	7.15
September	5.70	"	7.25
October	5.70	"	7.25
November	5.70	"	7.25
December	5.70	"	7.25

1915			
January	5.70	"	7.25
February	5.70	"	7.25
March	5.70	"	7.25
April	5.20	"	6.75
May	5.30	"	6.85
June	5.40	"	6.95
July	5.50	"	7.05
August	5.60	"	7.15
September	5.70	"	7.25
October	5.70	"	7.25
November	5.70	"	7.25
December	5.70	"	7.25

1916			
January	5.80 Flat	7.25	1.45
February	5.80 "	7.25	1.45
March	5.80 "	7.25	1.45
April	5.80 "	7.25	1.45
May	5.70 "	7.35	1.65
June	5.80 "	7.45	1.65
July	5.90 "	7.55	1.65
August	6.00 "	7.65	1.65
September	6.10 "	7.75	1.65
October	6.10 "	7.75	1.65
November	6.10 "	7.75	1.65
December	6.10 "	8.00	1.90

NUT COAL

1913	Cost to Retailer	Cost to Consumer	Gross Profit
January	\$5.85 Flat	\$7.25	\$1.40
February	5.85 "	7.25	1.40
March	5.85 "	7.25	1.40
April	5.35 "	6.75	1.40
May	5.45 "	6.85	1.40
June	5.55 "	6.95	1.40

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July	5.65 plus tax	7.05	1.30
August	5.75 "	7.15	1.30
September	5.85 "	7.25	1.30
October	5.85 "	7.25	1.30
November	5.85 "	7.25	1.30
December	5.85 "	7.50	1.55

1914

January	5.85 "	7.50	1.55
February	5.85 "	7.50	1.55
March	5.85 "	7.50	1.55
April	5.35 "	7.00	1.55
May	5.45 "	7.10	1.55
June	5.55 "	7.20	1.55
July	5.65 "	7.30	1.55
August	5.75 "	7.40	1.55
September	5.85 "	7.50	1.55
October	5.85 "	7.50	1.55
November	5.85 "	7.50	1.55
December	5.85 "	7.50	1.55

1915

January	5.85 "	7.50	1.55
February	5.85 "	7.50	1.55
March	5.85 "	7.50	1.55
April	5.35 "	7.00	1.55
May	5.45 "	7.10	1.55
June	5.55 "	7.20	1.55
July	5.65 "	7.30	1.55
August	5.75 "	7.40	1.55
September	5.85 "	7.50	1.55
October	5.85 "	7.50	1.55
November	5.85 "	7.50	1.55
December	5.85 "	7.50	1.55

1916

January	5.95 Flat	7.50	1.55
February	5.95 "	7.50	1.55
March	5.95 "	7.50	1.55
April	5.95 "	7.50	1.55
May	5.85 "	7.60	1.75
June	5.95 "	7.70	1.75
July	6.05 "	7.80	1.75
August	6.15 "	7.90	1.75
September	6.25 "	8.00	1.75
October	6.25 "	8.00	1.75
November	6.25 "	8.00	1.75
December	6.25 "	8.25	2.00

PEA COAL

1913	Cost to Retailer	Cost to Consumer	Gross Profit
January	\$3.90 Flat	\$5.25	\$1.35
February	3.90 "	5.25	1.35
March	3.90 "	5.25	1.35
April	3.90 "	5.25	1.35
May	3.90 "	5.25	1.35
June	3.90 "	5.25	1.35
July	3.90 plus tax	5.25	1.30
August	3.90 "	5.25	1.30
September	3.90 "	5.25	1.30
October	3.90 "	5.25	1.30
November	3.90 "	5.25	1.30
December	3.90 "	5.50	1.55

1914

January	3.90 "	5.50	1.55
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February	3.90	"	5.50	1.55
March	3.90	"	5.50	1.55
April	3.90	"	5.50	1.55
May	3.90	"	5.50	1.55
June	3.90	"	5.50	1.55
July	3.90	"	5.50	1.55
August	3.90	"	5.50	1.55
September	3.90	"	5.50	1.55
October	3.90	"	5.50	1.55
November	3.90	"	5.50	1.55
December	3.90	"	5.50	1.55

1915

January	3.90	"	5.50	1.55
February	3.90	"	5.50	1.55
March	3.90	"	5.50	1.55
April	3.90	"	5.25	1.30
May	3.90	"	5.25	1.30
June	3.90	"	5.25	1.30
July	3.90	"	5.25	1.30
August	3.90	"	5.25	1.30
September	3.90	"	5.25	1.30
October	3.90	"	5.25	1.30
November	3.90	"	5.25	1.30
December	3.90	"	5.25	1.30

1916

January	3.95	"	5.25	1.30
February	5.95	"	5.50	1.55
March	3.95	"	5.50	1.55
April	3.95	"	5.50	1.55
May	4.30	"	5.75	1.45
June	4.30	"	5.75	1.45
July	4.30	"	5.75	1.45
August	4.30	"	5.75	1.45
September	4.30	"	5.75	1.45
October	4.30	"	5.75	1.45
November	4.30	"	5.75	1.45
December	4.30	"	6.00	1.70

It will be noted from the above that the price of coal to the consumer on all grades of coal, excepting premium coal, which is not considered in the above tabulation, has increased about \$1.00 a ton.

During the same period the increase to the retailer by the operator has been in an amount varying from 40 to 50 cents a ton, for in many instances prices from May, 1916, are 10 cents higher per ton on sizes larger than pea than appear on the tabulation.

These increases, as pointed out in a preceding chapter, were three-fold. The first increase was in an amount of 10 cents, due to the imposition of the State tax and since January first, 1916, the tax being no longer collected as a separate item, is accounted for by the operator as being due to workmen's compensation, which is, therefore, styled the second increase. The third increase, varying from 30 to 40 cents a ton, was made necessary, the operators claim, by the terms of the new wage agreement of 1916.

Increases by
operators.

It should be expected that these advances in price to the retailer would naturally result in advances in that amount at least to the consumer.

Increases by
retailers.

The advance price charged by the retailer is made up of three distinct increases, the first of which was generally imposed about December first, 1913, and amounted to 25 cents a ton, which, while denied by the retailers, your Commission fully believes, intended to include the increased cost to the retailer due to the State tax. However, by the increase the retailer's gross margin of profit was increased 15 cents a ton.

The second increase generally made by the retailer was following the wage agreement of 1916, when the operators in May, of 1916, instead of being able to give the retailers the usual 40-cent discount, felt obliged by reason of the terms of the new agreement to increase the price to the retailer in an amount varying from 30 to 40 cents, which kept the price the same as April prices without the reduction, and upon being obliged to pay which, the retailer increased the price generally in the sum of 50 cents a ton, giving to him the second increase in his margin of profit of at least 10 cents a ton.

The third increase in the price imposed by the retailer upon the consumer was in December, 1916, when the price was generally increased by the retailer 25 cents a ton without any corresponding increase, in any amount, by the operator.

Increased profit
of retailers.

By reason of all of which the retailer enjoys an increased margin of profit of at least 50 cents a ton more, and in many instances 60 cents a ton more, than in January, 1913.

The situation with respect to the retailer has been during the time in which your Commission has been in service so unsettled with respect to his supply and so uncertain as to make the question of determining the justification of the increase, sought to be justified by the retailer, a very difficult one.

Increased cost
of distribution.

Without quoting from the testimony, analyzing or compiling complete data, the public generally is familiar with the labor situation and the increases demanded and received by the labor, handling and distributing the output of the retailer; this, in many instances has been very considerable, and in the case of the George B. Newton Company has occasioned an increased cost of \$80,000 a year.

Gasoline, horse feed, shovels, bags and buckets, taxes and wages have all increased with such startling rapidity and in such amounts, since January, 1913, as fully displayed in the testimony before your Commission, as to make some increase by the retailers, in addition to the increase by the operators to them

absolutely essential, and the net profits realized by the retailer prior to these increases are hardly comparable to the usual profit expected, sought and justified in the usual commercial business.

CONCLUSIONS.

Considering the testimony of the retailers as to the margins of profit enjoyed by them during recent years and the net profit resulting to them, their individual sworn statements must carry more conviction than the composite table compiled by your Commission, and believing, as the Commission does, that in recent months even since the investigation conducted by it into the retailing phase of the coal business that these margins of profit have increased, we cannot find them, from the testimony before us, to be the result of any illegal combination. nor do we feel that they indicate tremendously large returns to the retailer.

Fair margin of profit.

In New York City until the last adjustment of prices by the operators, the retailer's gross margin of profit was \$3.30 a ton; in Boston the gross margin of profit was \$3.10 a ton; in Baltimore it was \$1.65 a ton, this large margin of profit made possible by many reasons, among which is the practice of selling short tons in New York City and New England, a discrimination against Philadelphia and Pennsylvania generally in the matter of freight rates and your Commission believes somewhat due to less distribution costs.

Margins by foreign dealers.

In the City of Philadelphia there are upwards of three hundred retail coal dealers, each one of whom maintains a yard, an office and office force, a delivery service and most of whom sell on credit.

As distinguished from this condition, New York City, with a greater population and selling more anthracite coal, supports only sixty-one retail coal dealers.

The net result of the above is necessarily that Philadelphia, for example, is called upon to maintain, because these retailers must be maintained, an enormously large number of retail coal yards, overhead and fixed charges, delivery costs and salaries.

Your Commission does not believe that it would be either proper or becoming for it to recommend a reduction in the number of retail coal dealers or a combination of existing coal dealers

Excessive number of yards.

but is impressed with the fact that each additional dealer in any given district must result in an additional cost to the ultimate consumer in the price of anthracite coal.

While the conclusion of the Commission will doubtless not be popular, it is founded upon the bald facts developed by this investigation and it is therefore, impossible under these facts that your Commission should find other than they do.

SIXTH. THE MANNER OF ACQUIRING TITLE TO THE COAL LANDS, THE COMBINATIONS BY WHICH TITLE IS HELD AND SUGGESTIONS AS TO THE POSSIBILITY OF RELIEF TO THE PUBLIC BY APPROPRIATE LEGISLATION SEEKING TO MAKE AVAILABLE VAST ACREAGES OF VIRGIN COAL LAND NOW BEING HELD IN RESERVE.

The Philadelphia & Reading Coal & Iron Company, through the Reading Company, owns or controls 44 per cent of all the unmined anthracite coal and together with the Lehigh Valley Railroad Company, the Delaware, Lackawanna & Western Railroad Company and the Central Railroad Company of New Jersey, owns and controls eighty-six and forty-five hundredths per cent of all the unmined anthracite coal.

Control of
Acreage.

In view of this condition and at the urgent request of various individuals and the suggestion from them that a condition could be disclosed showing that the operators owning and controlling these vast acreages of virgin coal land so manipulated, controlled and curtailed the output of anthracite by refusing, either themselves to open up new collieries, or to permit extensions of leases to their various tenants so as to allow them to reach the deeper, larger and more profitable veins; as to substantially curtail and limit the output to the amount desired by them; a public hearing was held in the City of Pottsville, at which this phase of the inquiry with respect to the Philadelphia & Reading Coal & Iron Company was most fully investigated and the parties having complained to the Commission invited to be present.

Specific charges
against the
Reading
Company.

To this hearing were subpoenaed by a formal subpoena of the Commission, all of the mine inspectors of Schuylkill County and all of the lessees of the Philadelphia & Reading Coal & Iron Company, indicated in the memoranda of this hearing earlier in the report.

The mine inspectors were subpoenaed to produce their maps and cross sections showing all of the workings of the various operations under their jurisdiction.

Witnesses
subpoenaed.

This hearing was attended by the president of the Philadelphia & Reading Coal & Iron Company, its land agent and upwards of thirty of its employees.

The greatest latitude was permitted in the conduct of the hearing and any one having information, either direct or hearsay, was permitted and urged to disclose anything he knew. Complete tables were prepared showing the acreage owned and controlled by the Reading Company in Schuylkill County, by townships and cities. It was developed carefully as to what coal lands were accessible and could be most profitably and advantageously developed by the various operations now in progress in Schuylkill County.

The question of royalty received by the Philadelphia & Reading Coal & Iron Company from its lessees and paid by the Philadelphia & Reading Coal & Iron Company to those from whom it leased were fully and carefully developed.

There can be no doubt that the question of royalties helps control the cost of production of anthracite coal, and in recent years royalty has increased on prepared coal from 35 cents in 1901, to 50 or 55 cents in 1916, excepting in very occasional and exceptional instances, as with the Girard estates, where the lands are auctioned off and command a royalty of approximately a dollar per ton.

The large operators are, however, confronted with the same conditions in the leases which they hold from the owners from whom they lease.

Your Commission feels that with the contracts existing between private land owners and their tenants, unless a condition can be shown indicating that the large operators control the amount of royalty, we believe we have nothing to do.

Briefly, the conditions disclosed at the hearing referred to show that the Philadelphia & Reading Coal & Iron Company owns and controls 165,793 acres of land, of which 84,515 are classified by them as coal lands. Of these coal lands 57,783 acres are in Schuylkill County, 15,162 in Northumberland County, 6,558 in Dauphin County, 4,445 in Lebanon County, and 567 in Columbia County.

From these holdings there was produced for the calendar year of 1915, 8,346,520 tons 18 cwt., of which 683,379 tons 2 cwt. was produced from the Coal & Iron Company lands proper by its tenants. On this production a total royalty was paid to the Reading Company of \$178,727.68 by their tenants and on the 1,214,218 tons 7 cwt. which the Coal & Iron Company mined from lands other than their own, a royalty was paid by the Reading Company in the sum of \$452,793.39.

From the above figures it will be noted that the average royalty received by the Reading from its tenants was .261 per ton and

Scope of investigation.

Question of royalties.

Royalties received and paid.

the average royalty paid by the Reading to its lessors was .373 per ton. These figures can, of course, not be accurately read without regard to the percentage of prepared and steam sizes in both their own production and that of their tenants, which figures on short notice which your Commission had of this phase of the investigation are not available, but from the figures disclosed there is nothing to indicate a discrimination against its tenants by the Reading Company.

Average
royalties.

All of the tenants of the Philadelphia & Reading Coal & Iron Company accessible to Pottsville were called and examined by your Commission and were unanimous in expressing their complete and entire satisfaction with the treatment of their lessors, both as to the length of contract, the terms thereof and the possibility of securing proper and necessary extensions to their leases whenever such extensions were necessary to the proper and profitable operation of their collieries.

Extension of
leases.

In some instances, two or more of the independent operators sought to obtain the same concession from the Reading, in which event one or more must be disappointed, and in some instances the Reading Company had instead of granting extensions to its tenants proceeded with the operation itself where the veins were so situated as to be accessible to and properly developed by its own workings.

Competing
lessees.

It is apparent that the Philadelphia & Reading Coal & Iron Company are holding in reserve and wholly undeveloped, great tracts of virgin coal land and your Commission believe, although in the absence of direct investigation, that every other wise operator is doing the same and is first finishing by new and approved methods the second mining operation in all the old workings, so that there may be the greatest conservation possible of the supply.

Reserve
supply.

In this connection it is of interest to note that almost the precise question is now before the Supreme Court of the United States on an appeal from the Court below, in the Coal Trust Case, in which the Court in regard to this very phase said:

Coal Trust case.

OPINION OF JUDGE McPHERSON

“Coal is of no use while it remains in the ground. Its use is to be burnt, and no one can use it until it is brought within convenient reach. Obviously, then, whoever mines and prepares it for consumption performs a service to be commended. Moreover, the owner of coal in the ground, who has no other interest in the mineral than to sell it, is not in the position of an

ordinary merchant, who buys goods from the manufacturer in order to sell them again to the ultimate consumer. The stock of such a merchant is in process of continual renewal; as long as the mills are running his source of supply is always open, and he need not be greatly concerned about keeping a large stock on hand. But a miner's stock is in the ground; he is his own source of supply, and he can only continue to sell as long as his mine continues to produce. It is vitally important to him therefore that he should have a large reserve on which he may draw; for he must go out of business when his source of supply is exhausted. It is elementary prudence therefore to look ahead and provide for the future. If he is a miner of coal he must have coal lands; and, since coal is a much desired article, he is not only serving himself but serving the consumer also when he takes the necessary measures to prevent the supply from being exhausted or interrupted. And we are not aware that any Federal statute has declared it unlawful to lay in a large supply of raw material in order to carry on business for a considerable time. The mere size of his stock does not make a merchant an offender against the law. And especially should this be true, if in making his purchases he has acted under authority from a competent legislative body.

"But after a miner raises his coal to the surface and prepares it for consumption, it is still of little value. He may use some of it himself or may sell it to his neighbors, but this is a restricted market and can only benefit a few. To make the best use of his product he needs many markets and many customers, for only thus can he make the most profit for himself and bring a desired article within the reach of the numerous persons that wish to use it. To accomplish these results he must of necessity use the recognized agencies of transportation, the railroad and the barge or other vessel, for only thus can he and the consumer be brought together. Now, whatever promotes this result should ordinarily be encouraged, for trade is thereby created or nourished. If therefore a miner should find it economical and otherwise advantageous to build his own railroad, this of itself would seem unobjectionable, and even commendable. And if he had the right to own his own railroad as well as his own mine, there would seem to be no special objection against a sale of both to another person, or against his putting them both in the hands of the same trustee for his own benefit.

"Of course, this is abstract reasoning, and we are aware that concrete and practical objections may be made to it in part, but we think it will throw light on the problem before us. In 1896 the Coal and Iron Company was the owner of a large body of

coal land—the precise quantity or the proportion it bears to the whole deposit does not seem to be presently important—and had been mining for years. Anticipating the future, its purchases had been beyond its present needs, but this of itself was not a violation of law, even although its holdings had come to be large. Its product was much desired by many people, and the cessation of mining would have seriously affected the industry of the country and the comfort of many households. The State of Pennsylvania had given it ample authority to buy and hold the land, and indeed no one was attempting to take the property away or to prevent the Company from using it. The mines were so situated that the only railroad it could use at all—or at all events, could advantageously use—was the Reading Railway, and if it were shut out from this means of getting to market its customers could not obtain the coal on which they were accustomed to rely. Now (laying the commodities clause aside) we do not see with clearness in what the unlawfulness of the Coal & Iron Company's conduct can be said to consist. Its business, the mining of coal, was lawful, its ownership of coal lands was lawful, and its use of the Reading Railway to get to market was also lawful. The Railway and the Coal & Iron Company were not competitors; each performed its own function in putting a useful article into the hands of consumers. Although the Coal & Iron Company was a large producer of coal, and therefore a large shipper and a large seller, the size of its business was not in itself an offense. Indeed in some aspects it may be regarded as a merit, for the more coal the company produced the more extensive would be its operations, thus benefiting labor and the merchants that furnish supplies to the mines; and the larger would be the quantity of coal at the consumers' command. But it is true, that while much of its conduct may have been lawful, the Coal & Iron Company and the Railway—separately or in combination—may have offended against the statute in other particulars, and if so they must answer for whatever misdoing has been proved.

“Much of the Government's complaint seems to rest on the admitted facts that the Coal & Iron Company's land holdings are large and that the Company ships and sells the largest percentage of all the coal that reaches the market. But this is not enough; before these facts can be counted as an offense under the statute, it is necessary to go further and to show that harm had been done, or is likely to be done. Who has been injured thereby, and in what manner? At this point the Government's proof appears to be insufficient.”

CONCLUSIONS

Your Commission fully believes, from a review of all of the testimony produced at this hearing and by a careful survey of the physical properties concerned in this investigation, that there is nothing whatever to indicate on the part of the Philadelphia & Reading Coal & Iron Company, the only one which was investigated, any effort to curtail the output, either by refusing extensions of leases or the offering of impossible terms, and feels in duty bound after its painstaking effort to disclose such facts to commend the existence of the cordial relations between the Philadelphia & Reading Coal & Iron Company and the independent operators leasing from them their land.

No proof of coercion.

GENERAL SUMMARY

Your Commission is aware that the analysis undertaken of the anthracite coal situation is not without danger to those investigating that situation, due to impressions gathered from a hasty survey of so vast an inquiry.

Shortness of time.

Much remains undone which could have been done, and, doubtless, efforts were fruitlessly expended in unnecessary directions, but your Commission believes its findings and conclusions to be free of prejudice toward or interest in any of its phases.

The net result may well be expressed in the single statement that since 1913 coal has advanced a dollar a ton or approximately fifteen per cent.

Advance in price.

In 1916, due partly to wage dissensions, and new and more expensive wage agreements, multitudinous petty strikes contrary to the wage agreements, scarcity of labor, higher wages, uncertainty of supply, increased taxation, humane labor legislation, advanced costs of supplies in both the producing and distributing departments of the industry, the advanced royalties demanded by owners in recent years, the excessive freight rates in Pennsylvania, and lastly but not unimportant, the expense to operators and others of constant and extensive investigation by the State and Government, it is little wonder that the operators have advanced the price from forty to fifty cents a ton.

Causes of advance.

The same logic applies proportionately, at least, to the independent advance of fifty cents a ton made by the retailers.

This total advance of one dollar a ton, or fifteen per cent, on prepared sizes is therefore, in the judgment of your Commission, due to many and varying causes and hardly by the remotest reasoning chargeable to the item of State tax.

No proof of conspiracy.

The question of illegal combination might be presumed from a unity of results brought about, according to the operators, by a similarity of conditions confronting them all and it is to be presumed that conditions, excepting trivial local ones, are much the same throughout the industry and that they compel and doubtless merit a similar result in all the instances.

Thus your Commission feels unconvinced of any illegal conspiracy or unlawful combination amongst either branch of the industry to take advantage of the Roney Act or other mentioned conditions, to improperly and unjustifiably increase the price of anthracite coal.

We have endeavored to develop in detail the varied causes for the increase and to distinguish the just from the unjust and to close our report with some suggestions to Your Excellency and Honorable Bodies concerning various phases of the situation, in the following :

RECOMMENDATIONS

1. Hyde Park, Scranton.

Robbing of pillars.

Cave-ins.

Your Commission took occasion to visit that section of the City of Scranton known as Hyde Park, underlaid with the Diamond, Rock, Big, New County, Clarke, Dunmore and other veins of coal, from which the skipping of pillars and robbing thereof has so utterly weakened and destroyed their support and protection as to cause squeezes, caves and fallins through the overlying veins and to the surface, causing subsidences therein, in both streets, large improved property, schools and churches and to the detriment of many small property owners, a great number of whom are foreigners, and has completely demolished and destroyed many of their buildings, we believe, without occasion.

Surface owners.

That it may be necessary to take out this coal and that its value may be such as to demand its complete removal and that the owners of surface rights may have in their ignorance or untimely desire to acquire homes, released for all damages to their property, seems to your Commission to only aggravate the situation, and make the occasion one of absolute necessity for the State of Pennsylvania to enact legislation to protect their property and remedy the condition.

Remedial legislation.

We urgently recommend immediate and thorough investigation, if further investigation be necessary, by this Legislature, of this condition and the passage of legislation at this session to relieve these property owners and restore their property.

2. Freight Rate Case.

Bellis case to be concluded.

We recommend and urge that the issues involved in the appeal in the case of the City of Philadelphia, Harry E. Bellis, et al., vs. the Philadelphia & Reading Railway Company, et al., be forced to a determination. We are advised that the Attorney General is now urging a judicial determination of these issues, that the City of Philadelphia may have the benefit of the reductions

ordered, if the opinion of Commissioner Pennypacker be sustained and we commend this action.

3. Reduction of Transportation Costs.

The Commission is impressed with the possibilities offered in the suggestions with respect to the utilization of canal routes in Pennsylvania and recommend an investigation thereof by the State of Pennsylvania and the filing of a complaint, if necessary, by the Attorney General's Department, to determine the liability of the owners of these canals to afford better transportation facilities to the public.

Investigation of
canal possi-
bilities.

4. Further Investigation of Situation.

Your Commission recommends that in the event of further investigation of the coal situation by the State of Pennsylvania, that the scope of such supplemental investigation be sufficiently broadened to include the bituminous coal situation as well.

Further legisla-
tive investiga-
tion.

5. Report of this Commission.

The original report of this Commission, together with a transcript of all the testimony taken and all of the data, etc., compiled by it, have been filed with the State Librarian of the Commonwealth of Pennsylvania for further possible reference, and your Commission has had printed and paid for out of the appropriation made to cover its expenses, twenty-five hundred copies of this report, which disposition, concluding its labors, will be final, unless the Legislature of the State of Pennsylvania shall at this session otherwise direct.

Disposition of
Report of Com-
mission.

All of which is respectfully submitted.

JOHN LANGDON,
E. J. LAFFERTY,
ROBERT S. GAWTHROP,
Chairman.

J. PAUL MACELREE, *Counsel.*

West Chester, Pa.



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